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Adaptive Neuro Fuzzy Inference System for Diagnosing Coronavirus Disease

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Abstract

Coronaviruses which are positively sensed single-stranded Ribonucleic Acid (RNA) viruses are causing serious threat to global public health due to the widespread of the virus and no one having immunity to the virus. Timely diagnosis of the disease has become a major challenge due to the limitation associated with the present methods used in diagnosing of COVID-19 and a limited number of COVID-19 test kits available in hospitals due to the increasing number of cases daily. There is a need to propose a model that can provide timely, differential and alternative diagnosis option to prevent COVID-19 spreading among people. In this study an ANFIS based model was proposed for diagnosing COVID-19, the model was trained and tested

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using 600 COVID-19 dataset. The ANFIS model had accuracy of 96.6% for predicting and diagnosing COVID-19.

Keywords: Coronavirus; COVID-19; Diagnose; ANFIS

1.0 Introduction

The world has experienced several wide spread diseases causing serious threat to global public health affecting a large proportion of the population, including the 2002 Severe Acute Respiratory Syndrome (SARS) epidemic that caused 774 deaths out of about 8000 cases, the 2009 H1N1 influenza virus pandemic with 18500 deaths, the 2012 Middle East Respiratory Syndrome (MERS) epidemic that caused 800 deaths out of 2500 cases, the 2014 Ebola virus outbreak with 28616 cases and 11310 deaths, and the recent Coronavirus Disease 2019 (COVID-19) pandemic [1].

Coronaviruses (CoVs) are positively sensed single-stranded Ribonucleic Acid (RNA) viruses that belong to the order Nidovirales, family Coronaviridae, and subfamily Orthocoronavirinae with four (4) species; alpha, beta, delta and gamma coronaviruses [2]. Alpha CoVs and beta CoVs originated from bats and rodents while delta CoVs and gamma CoVs have their origins from avian species [3]. COVID-19 can be transmitted from human-to-human by respiratory droplets from sneezing, coughing and aerosols, with symptomatic people being the major source of transmission. It has a dynamic incubation period of about 5 to 14 days [4].

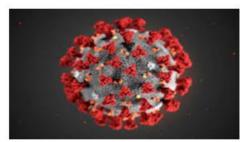


Figure 1: Coronavirus Source: <u>www.newscientist.com</u>

CoVs have been reported to be the major causes of about 5% to 10% acute respiratory infections [5]. The first outbreak of COVID-19 was reported in Wuhan, China in December, 2019 with the reported confirmed cases standing at over 29.9 million and recorded deaths 942,735 worldwide which is still counting day by day. COVID-19 diseases continuing to infect and reduce human populations which is due to the fact that no one has immunity to COVID-19, which means thousands to millions of people are likely to be more vulnerable to this viral infection and severe disease. COVID-19 affects different people in different ways, the World Health Organization (WHO) listed the symptoms of COVID-19 from the less common symptoms to serious symptoms [6]. The listed symptoms of COVID-19 is tabulated in Table 1:

S/N	Less common	Most common	Serious symptoms
1	Aches and pains	Fever	Difficulty breathing or shortness
			of breath
2	Sore throat	Dry cough	Chest pain or pressure
3	Diarrhoea	Tiredness	Loss of speech or movement
4	Conjunctivitis		
5	Headache		
6	Loss of taste or smell		
7	Rash on skin, or		
	discolouration of fingers or		
	toes.		

Table 1: COVID-19 Symptoms

Source: WHO, 2020

For the diagnosis of COVID-19, detection of viral RNA in the secretions from the respiratory tract of infected patients by Reverse Transcription-Polymerase Chain Reaction (RT-PCR) test is currently the standard method for diagnosis of COVID-19. This method have some weaknesses ranging from long turnaround time usually around 2–4 hour to the requirement of specialized facilities to carry out the test. Scientists around the world have been devoting effort to developing improved nucleic acid-based, simpler and faster methods. The United States (US) FDA issued an emergency-use authorization to Cepheid's Xpert Xpress SARS-CoV-2 test, which became the first point-of- care COVID-19 diagnostic test to receive this designation in the US. The test is designed to use the company's automated GeneXpert Systems and has a turnaround time of approximately 45 min [7]. Timely and differential diagnosis of disease are today becoming a necessity in medicine and health systems [8], [9]. In this regard, proposing and developing expert systems based on machine learning method for accurate prediction, efficient diagnosis and effective management of diseases has drawn significant research attention among

researchers and physicians [8-14]. However, this study is to propose a model based on Adaptive Neuro-Fuzzy Inference System (ANFIS) for diagnosing COVID-19.

ANFIS is a branch of Artificial Intelligence (AI) which plays a major role in prediction, modeling and inference. ANFIS is a Fuzzy Inference System (FIS) implemented in the framework of adaptive networks. It integrates both Neural Networks (NN) And Fuzzy Logic (FL) principles into a single framework with learning capability to approximate non-linear functions and works as a universal estimator [15]. It is based on the Takagi–Sugeno FIS, developed in the early 1990s. The learning networks in this model are based on mathematical computations capable of solving complex problems. ANFIS based predicting models which contains the knowledge and experience of an expert can accurately predict diseases [11], [16].

2.0 Related Works

There are number of numerous studies which have been carry out on detecting, predicting, classifying and diagnosing of COVID-19 using Artificial Intelligence (AI).

Alile and Otokiti, proposed and simulated a Bayesian Belief Network (BBN) model to predict COVID-19 using 47 disease ailments dataset and each ailment has a value which represents the probability of such disease ailment causing COVID-19. The proposed model was trained and tested and it was reported to have an accuracy of 99% in predicting COVID-19 with its symptoms [17].

Narin et al. proposed a three different Convolutional Neural Network (CNN) based models (ResNet50, InceptionV3 and Inception-ResNetV2) for the detection of coronavirus pneumonia infected patient using 100 chest X-ray radiographs. The chest X-ray radiographs consists of 50 normal healthy people and 50 COVID-19 patients. The three CNN models; ResNet50,

InceptionV3 and Inception-ResNetV2 were evaluated using five-fold cross validation and it was reported that ResNet50 model had the best detection accuracy of 98% in detection of COVID-19. While the other two models reported 97% accuracy for InceptionV3 and 87% accuracy for Inception-ResNetV2 [18].

Sethy and Behera proposed a model for detecting COVID-19 by extracting features from chest X-ray images using a deep-learning algorithm and classified the images as either infected or noninfected using a Support Vector Machine (SVM). 11 deep-learning models was employed; AlexNet, VGG16, VGG19, GoogLeNet, ResNet18, ResNet50, ResNet101, InceptionV3, Inception-ResNetV2, DenseNet201, and XceptionNet. Two categories of dataset was collected; the first containing chest X-ray images of 25 infected patients and 25 non-infected patients and the other containing chest X-ray images of 133 infected patients (e.g. MERS, SARS and Acute Respiratory Distress Syndrome (ARDS) patients) and 133 non-infected patients. They performed separate feature extractions on each dataset using various models and achieved a 95.38% accuracy with ResNet50 and SVM [19].

Gozes et al. proposed a system to automatically identify COVID-19 patients and examine the disease burden quantification by employing a deep-learning approach on Computed Tomography (CT) scans using a dataset of CT scans from 157 foreign patients from China and the United States of America (USA). The proposed system analyses the CT scan at two distinct levels; subsystems A and B. Subsystem A performs a 3D analysis and subsystem B performs a 2D analysis of each segment of the scan to identify and locate broader diffuse opacities including ground-glass infiltrates which have been clinically identified as representative of COVID-19. For the system evaluation ResNet50 was applied to subsystem B and reported an accuracy of 98.2% and specificity of 92.2% respectively [20].

Fatima and Samy designed and implemented an expert system to detect and diagnose symptoms of COVID-19 using Clips and Delphi expert system languages. The main sources of the knowledge for this expert system are medical and specializes websites for COVID-19. The knowledge captured are converted into the Knowledge Base (KB) using CLIPS shell. The diagnosis of COVID-19 by the expert system was accomplished by displaying all symptoms of COVID-19 and selecting from the symptoms in the list and then analyze to diagnosis the day of recognizing symptoms, survival and spread, favorable conditions and snapshot of the status. The expert system was assessed by doctors and they were satisfied and accepted with its quality of performance [21].

Fu et al. proposed a classification system based on ResNet50 to detect COVID-19 and some other infectious lung diseases (pulmonary tuberculosis and bacterial pneumonia). 60,427 CT scans from 918 patients were dataset collected for the proposed system. 14,944 of these CT scans were from 150 COVID-19 patients and 15,133 from 154 non-COVID-19 viral pneumonia patients. Several tests was carried out for numerous number of lung diseases. The achieved accuracy, sensitivity and specificity of the system were 98.8%, 98.2% and 98.9% respectively [22].

3.0 Research Methodology

3.1 Dataset

In this study, the dataset used in training, testing and diagnosing COVID-19 are 600 data from patients who visited Hospital Israelita Albert Einstein, Sao Paulo, Brazil who samples were collected to perform the COVID-19 test. The data was retrieved from Kaggle dataset open source repository. The chest dataset consists of 300 negative cases and 300 positive cases of COVID-19 patients. In Figure 2 and Figure 3 the sample dataset are shown:

					COVID-1	ש Dataset	(Negative C	ases)				
/N	fever	dry cough	tiredness	aches & pains	sore throat	diarrhoea	conjunctivitis	headache	loss of taste	difficulty breathing	chest pain	rash on skin
1	-		0.017197	8.080519969		7.438448	9.529350677	0.38212		5.531750695	9.633530723	9.980803
2	-		6.056773	2.735570081		7.480207	3.323889643	9.989759		5.930374715	1.149107175	0.544740
3				2.2056898		8.576355	1.195635118	3.692319		5.465890274	7.820979624	8.533884
4				7.930725888		3.872717	4.801095932					
	-									7.475201618 4.069935919	1.850609441	9.73386
5	-		6.148718	0.186144102		6.180857	2.305469807	9.122435			0.845397813	9.66788
6			1.190278	5.90988		5.436939	2.835097389	3.185295	4.68909451	7.122081751	0.798426613	8.77228
7	7 1.252459	2.27368514	0.351108	8.564615429	9.46307026	8.635129	5.027158737	1.30886	0.838919878	8.074206773	9.616357426	3.8190
8	3.461292	8.0638508	3.149146	0.092273166	8.838341211	0.613613	4.397325396	7.579402	5.2022914	1.733942208	7.655930082	1.48329
9	9 0.803365	1.41540272	7.541408	3.427420367	8.773708275	4.389826	2.791551952	6.02471	9.366045911	1.757715988	4.635885966	8.89370
10	1.861533	0.65675478	0.655248	0.123896138	7.816668715	3.323884	7.448487443	2.464871	0.616353322	5.943789797	5.645502373	7.18177
11	1 1.06173	4.72508304	5.764021	1.50199212	3.499469695	9.7714	0.444484524	1.023077	3.082668797	0.80382196	9.179952745	3.89151
12	2 7.826105	8.41589004	2.360213	2.855563812	2.940497194	5.222751	6.591545995	7.085994	8.308467033	9.055198667	3.439889527	9.24479
13	3 0.338983	7.04977127	2.206344	5.20022107		0.207066	1.971270306	6.089622	2.087571638	1.362260913	9.675026068	2.57004
14	-			3.684764143		2.047271	0.950697854	3.682168		5.628686547	9.631521376	8.74110
15	-		2.221247	1.165001464		9.288406	5.370964759	1.916047	2.969897628	2.063593943	1.443073868	0.1551
16	-		6.848124	2.728060739		8.220609	8.538993626	9.126569		5.213346943	3.996127943	5.7044
17	-			4.988541206	-	1.621048	9.607116948	2.508699		1.867174743	2.972397053	1.27825
1			1.090489	6.667677508		9.650459			3.290800454		6.495690754	3.5764679
19			9.476761	4.581970363	8.397184238	7.871425			9.060558215		7.564317709	1.8468198
20				0.470872536 9.907299317		9.310562 9.106519			3.629061852 1.384545898		6.939220423 6.405829864	2.6865833
2	-			7.598780748	8.818709957	6.92618			9.514975706		0.322243354	0.4837870
2			4.47389	9.236100659	9.705167257	5.387456			5.051634479		4.078863699	6.5710393
24	-			7.352649751		4.904799			5.370296636		1.478694343	1.184326
2	5 0.055215	2.92215554	7.201691	9.754246354	7.992910784	1.133312	4.115105395	6.1877	2.009615845	6.376821677	8.116889649	6.8073432
2				5.097103563		2.024231	0.628066989		7.159446483	7.113419434	9.820552865	7.0028825
2				0.319859779		3.528439	0.828337978		2.211782512		5.849330776	4.7408057
21				3.317743087	3.86590673	6.49E-04			8.550028517		4.987951687	0.0431150
29	-		2.375772 4.921706	8.675963266 2.517262976	6.943457422 9.419268402	0.240231 9.886724	8.680526173 9.61307567		2.181581849 8.593966964	7.631758418 6.807060985	7.12224558 0.32162979	6.6026746 0.8886493
3:	-		7.71413	4.36353792	0.92303881	0.42498			9.576012405		9.104342636	4.0246530
3				8.693150167	4.513654547	8.929129			2.790592836	4.813088205	2.35701673	5.6586901
3			5.487489	5.613293664		0.287866			2.134608298		7.634916819	1.7092330
34	4 6.825284	5.82268872	5.835951	2.794847346	5.029420471	6.680931	5.990474627	9.476799	7.388354215	3.182540017	7.164324386	2.1422701
3				5.536205295		6.327849		7.952747	8.06631859		0.704714328	7.5748867
3				2.772161922	2.426981281	7.163573			6.925576167		0.679879946	7.5108706
3	7 7.18935	0.13755756	8.568331	8.854196236	3.32977999	7.193377	7.028723581	6.557352	4.151730837	6.939837997	0.22422257	2.4139879
38	4.544086	5.67134013	1.822837	6.171257541	0.249343876	1.350787	8.723109613	0.276391	2.120561923	1.572561336	3.102290098	5.65041
			5.444624		4.557123908	4.73412	8.029860169	1.635748	0.301047371	0.713289325	9.274120205	0.14998
40	0.91711		2.346717			4.459363	4.320798398	6.64451	9.436300413	1.24701729	7.235867457	6.96799
			7.908488			4.537807	9.923415081	1.717355	7.709290584	6.430795761	8.86447011	5.52883
			6.601383 7.965111			4.512469 6.663507	9.849753196 4.877103452	9.048322 5.725591	1.732703224 7.372601926	1.992041541 0.394164337	9.901922478 8.167180685	0.32109 2.2487
			3.323646		0.698451169	2.82966	3.280860058	2.918816	8.303451454	5.545758381	9.411082845	3.3492
			6.445745			1.753378	7.304300883	1.622862	3.262641435	7.998289168		6.24850
46	7.696337	8.96529778	6.918573	0.481223114	2.079042569	7.83946	2.542814409	5.8261	1.85528886	5.110244658	0.95810667	9.47669
47	5.753807		5.987377	0.297775232	4.305121531	4.710439	0.6460093	0.72171	0.495722484	5.78018749	1.166551232	0.17284
			2.435088	5.037074176		1.657493	7.225095975	0.501515	4.361255831	7.249914139	3.682243006	2.87517
			6.330903			3.812763	6.91549127	6.692839	0.381348956	4.271270069	1.335034621	1.34861
			4.273401 4.748429			3.883673 3.793573	1.286151486 5.055740949	6.417149 7.97166	5.598524351 7.19950157	2.932971706 0.146383906	6.20493603 6.524560337	5.05586
			4.748429 8.256206			0.110522	8.076671667	5.787962	0.114964063	0.836729485	2.5426102	1.98881
			4.178831			0.533229	8.55246238	8.067653	2.614376125	4.761009015	0.608253086	4.83596
54			6.479767			9.630039	0.43079125	4.544153	8.604644305	7.801229883	9.555618491	3.61677
			1.933229	8.344294048	6.084197643	6.490153	0.452436987	5.017141	1.465223744	4.655501048	2.241343903	9.12084
56	1.346622	4.65617181	0.638641	6.998724551	6.684043515	3.413008	3.517831461	0.284216	0.080606391	7.81319792	8.328407631	6.86259
	4.971668		6.951045			6.172685	1.738019471	8.004918	5.457925638	6.166708692		
			4.947319	1.184782126		7.913435	2.585753531	6.907384	8.84476862	6.525485763	3.232960209	9.61220
			1.734696			9.409218	7.068173058	3.197816	9.505394955	5.632058022	4.007607554	9.2964
			8.250329			9.994891 8.103294	0.77624066	2.235401	6.57155086	0.238372955	7.69826048	8.72767
			9.842179 1.355797			8.103294 3.460098	7.902244333 1.38337672	7.518265 3.979205	1.060267671 4.107974018	9.523707543 6.60918729	6.817201535 3.015396974	8.09731
			3.465477			8.205919	9.565498517	6.477609	5.151090465	0.0152317	8.004501201	5.14372
			3.551322			8.125846	1.298965243	6.411698	9.150857565	2.725580465		9.62128
			2.146642			8.048111	8.011923263	2.42131	1.838133262	1.027093465	4.42227195	4.60466
		5.13350298	7.760925			1.311842	4.79539921	1.308808	1.11854162	6.267888487	6.040917963	4.48248
	6.466383		0.938818		2.359353865	5.79361	6.513359593	8.619996	2.496809182	7.039119144	9.20089922	7.67277
68			4.951079			2.429325	0.376991978	6.023371	2.151685199	5.356157621	9.516067084	7.16242
			6.859791			8.170989	1.637505405	5.39515	3.119721216	8.726867814	9.451696104	7.25854
			1.789677 6.874297	0.169267447		6.180917	3.735125595	2.918211	2.601417756 5.061205359	6.874368103 0.042032494	9.058797202 6.999135416	7.11788
		7.43192946 3.97725438	6.874297 8.29924	4.580952291 6.737430255		1.443722 2.307726	8.075894445 4.046820298	3.617314 9.558455	5.061205359	0.042032494 7.720911974		8.13103 3.39573
			8.29924	6.737430255 4.70772057		1.004404	4.046820298 0.44789194	9.558455 3.950906	7.992011813	3.933835371	8.71810497 1.214897733	4.91726
			9.071096			1.256964	3.090074206	0.188325	2.150173459	7.920777239	5.583301963	1.05424
			8.990192			7.020785	9.551111943	1.484319	9.019086868	2.869569551	3.261896078	6.30813

										2.000000002		
76	2.499982	4.67597905	9.628048	0.832201942	3.198602389	9.561105	2.114500265	6.410738	3.499438286	6.746231761	3.278016193	2.491032
77	6.17195	4.5277907		5.049682618	2.126441067		4.177556727	4.401564	2.266319522	1.920051694	0.92796519	4.742993
					9.127824182					7.141534431		7.247333
78	3.208152	8.71980027		1.864302333			3.149403547	4.081267	1.668861915		6.2918201	
79	6.324701	6.61107862	0.034563	7.75102698	9.735744904	5.718093	9.879681953	5.057219	5.989801953	4.478394492	2.536212089	2.36045
80	9.90367	9.73845556	5.278782	4.077196529	1.334868647	2.17343	1.387791686	3.690751	4.786031977	5.706476447	5.031689967	3.889054
81	9.160685	0.45294092	7.029188	8.821374175	8.702242355	6.178125	0.488059895	8.312152	3.997443325	2.913039232	3.872297971	8.048594
82	6.594573	5.21573076		5.261668351	7.175626612		2.835653322	8.40755	7.125523243	6.981269078		5.077705
83	7.672699	7.11436836		9.401445582	8.34251093		2.325475794	7.786349	6.109994389	8.305925964	0.621913021	5.794408
84	7.526082	0.78627939	7.47974	5.524847221	2.124320538	3.284492	0.014490301	3.727707	9.059809873	8.46589485	1.772424089	2.561288
85	8.889708	7.12785183	8.309382	5.067341863	4.164080976	7.19779	2.102155546	9.510573	1.325258523	6.88399593	8.228039177	6.546001
86	6.530542	1.18001034	5.083775	4.82118537	6.447482202	6.05872	2.556094543	9.645775	6.727223645	1.259774221	5.635342491	9.257365
87	4.352924	0.56206202		4.224448687	8.467921977		8.794726687	4.414539	9.933298854	8.042405975	8.34763054	5.846463
88	6.015627	6.80458562		0.074056304	3.07554561	1.146247	2.85974704	3.865399	9.86598579	7.967422753	3.165197156	2.917883
89	4.926284	5.42897612	1.930545	3.807390038	1.247948976	5.760989	8.070981887	2.571649	1.587439475	6.744682601	9.53846496	9.922918
90	6.542563	7.43134804	5.449049	5.328131743	9.681391071	2.602105	4.107752018	4.666025	5.398957576	5.963731325	3.724122182	6.576923
91	6.404419	3.62279378	8.15986	0.154602902	6.149070467	4.651681	1.600177619	9.575102	3.16343886	8.594571271	2,70200273	3.378224
92	5.226204	1.83854724		7.516853816	3.223489296		7.415157462	7.361301	3.251758387	5.329923819	1.103753246	5.560104
93	0.277102	3.74211864		3.07852048	9.922356756	8.67182	8.067337099	6.663655	5.561459642	5.059367631	3.38176053	9.865183
94	7.092746	7.11748999	2.766273	9.397913364	0.509860173	1.432633	0.43774752	0.544354	0.378866422	1.385699798	9.388757948	8.358426
95	6.455489	1.73134053	4.302876	8.74228196	8.029635488	9.573626	9.751458545	1.808511	8.140594158	7.641412262	2.439170548	2.125043
70-	vr.oones?	LP-01010007	1.0.25107	G.114161307	LOUZSCOOTEOT	-A.760267	UNCONCENST		URINGOSTAGOT	·FURSABLEEZ		LPLE00101
96	6.938268	0.31641728	9.85193	5.104141862	2.745337189	4.713618	6.586617317	3.496754	5.363650562	5.513344437	6.910668	2.6926721
									7.374235251			
		1.63388245	0.943856	9.535036838	9.441777541	4.621266	0.011925487	9.642062		0.645487537	7.810639806	4.1236232
		7.32720791	3.43011	5.28886523	6.226254986	1.603186	6.575367203		9.976343251	0.786191648	4.887074189	4.1321446
99	6.15719	5.4763487	0.500151	1.373480293	1.617702187	9.175789	4.191335185	8.852417	0.656598816	6.224730919	0.292166439	3.914596
100	3.862073	2.75323414	1.285758	7.415261389	4.322138715	2.681979	0.079483443	6.436124	1.809017882	6.536310074	1.555746914	0.628528
	4.735765	0.1639204	4.713891	6.546527713	0.605076252	9.337207	0.732979277		8.965628227	8.286839752	6.249462969	4.857292
		9.24348747	2.611611	5.023286237	4.98619644	2.75314	6.553383232		1.332495174	3.820591954	4.197109036	7.741955
103		8.77152857	8.468836	6.509876146	0.164747521	5.661601	5.773544143	7.277689	4.640319814	9.596508463	0.98254153	5.029484
104	2.216022	1.18015889	7.812069	7.300919081	3.961363995	5.305306	6.809107933	5.379086	2.044833658	7.142512247	7.218368471	4.6692734
105	3.810866	0.05976339	2.564024	5.128693161	7.345742187	6.683075	9.827309743	3.434303	3.937547417	0.924704236	9.105713361	9.328764
		5.35212279	0.427484	1.738084478	3.013553861	2.410479	8.246740362		1.323499776	3,668773547	3.785409961	7.275412
	1.097663	7.25299264	2.454196	3.066278274	9.265165793	4.843986	9.723849486	0.451512	4.957793169	8.025788237	3.3198115	7.409845
108	8.936091	2.74201974	6.487522	2.465110793	2.135152381	2.597063	8.597635588	7.671908	8.208007304	9.336050694	4.26449209	6.892401
109	8.000425	6.35318078	6.826786	1.292734083	6.898250518	0.158644	2.420594219	6.060107	1.930085803	0.586101776	9.32905272	6.6248824
		8.96943638	7.051076	2.927266205	7.086316851	7.969939	2,688962881	9.712583	3.296917965	1.914331491	3.676411276	8.880882
											7.44232387	
		2.14212906	8.004032	8.241825422	8.482390147	5.673642	4.038195682	7.845996	1.383680669	9.029774709		6.4580113
112	5.244438	6.9408677	1.506789	2.777882443	4.162446986	0.156804	5.907559118	5.605623	4.119550772	1.359953438	0.879301108	0.160344
113	2.030864	6.98671147	9.51743	5.947015953	4.609100933	5.075421	3.446731089	1.012361	3.675189591	8.284867043	5.646604837	4.778829
114	1.769608	7.18879335	7.050858	9.396146734	9.382788838	5.717039	4.984643392	5.211381	4.521776212	9.88971322	4.097048552	1.327455
		7.95188854	6.099093	6.916074143	8.799533718	9.571965	8.607020301	3.206514	4,108795876	6.807477144	2.353826766	6,943747
	3.480638	7.72363855	9.691816	6.019381293	9.983191137	1.286085	8.598743796		7.976308128	8.029940663	4.419177189	4.223751
		2.29678562	1.725699	5.840880014	6.068766686	5.286445	9.442503904		3.563953503	7.741358393	2.463019532	4.3666925
118	5.693483	2.11619842	4.126237	3.04739628	9.167505784	7.931077	5.666694363	7.734896	5.386667818	8.490023027	1.14188274	6.4177854
119	5.505554	9.83812417	1.346934	0.174544918	0.074201536	7.098087	9.738326324	0.415025	6.365904052	1.870315427	8.364718819	7.8353176
120	4,90577	8.2731061	0.261596	1.208338349	6.435242802	1.604867	0.532468622	0.657889	7.402427892	9.783595399	9.331943768	7.9720451
	5.044346	7.23656395	4.178831	1.742624206	0.577399259	0.533229	8.55246238		2.614376125	4.761009015	0.608253086	4.8359604
122	4.72574	7.72104646	6.479767	6.756744901	6.944474225	9.630039	0.43079125		8.604644305	7.801229883	9.555618491	3.6167736
123	9.916913	5.85855155	1.933229	8.344294048	6.084197643	6.490153	0.452436987	5.017141	1.465223744	4.655501048	2.241343903	9.120840
124	1.346622	4.65617181	0.638641	6.998724551	6.684043515	3.413008	3.517831461	0.284216	0.080606391	7.81319792	8.328407631	6.8625987
125	4.971668	6.19539432	6.951045	0.439562441	9.847846906	6.172685	1.738019471	8.004918	5.457925638	6.166708692	6.666866226	8.9277873
	2.900346	6.05503165	4,947319	1.184782126	9.06526319	7.913435	2.585753531	6.907384	8.84476862	6.525485763	3.232960209	9.6122002
		4.37706763	1.734696	2.48499186	1.937542667	9.409218	7.068173058	3.197816	9.505394955	5.632058022	4.007607554	9.296496
128	9.270092	5.22444746	8.250329	7.493193272	6.581420495	9.994891	0.77624066	2.235401	6.57155086	0.238372955	7.69826048	8.727675
129	9.520427	8.90066556	9.842179	5.79019256	4.238538575	8.103294	7.902244333	7.518265	1.060267671	9.523707543	6.817201535	8.0973174
		1.33542118	1.355797	6.048756841	1.240710916	3.460098	1.38337672		4.107974018	6.60918729	3.015396974	8.498382
					5.264960755	8,205919						
	7.235682	2.86381564	3.465477	5.334274276			9.565498517		5.151090465	0.0152317	8.004501201	5.1437264
	8.061062	5.00494228	3.551322	8.307061458	5.567525955	8.125846	1.298965243		9.150857565	2.725580465	9.296115545	9.6212813
133	9.894339	7.15736252	2.146642	0.694847571	4.598381636	8.048111	8.011923263	2.42131	1.838133262	1.027093465	4.42227195	4.6046651
134	5.460002	5.13350298	7.760925	4.615070528	0.688135331	1.311842	4.79539921	1.308808	1.11854162	6.267888487	6.040917963	4.4824858
	6.466383	1.9956714	0.938818	4.909611876	2.359353865	5.79361	6.513359593		2.496809182	7.039119144	9.20089922	7.6727741
· ·					· · · · ·	· 'ı			· · · · ·		4	
136	7.50668	3.73963108		5.238277035	5.000026445	2.429325	0.376991978	6.023371	2.151685199	5.356157621	9.516067084	7.162423
137	2.269919	4.63214928	6.859791	5.128297413	9.662512308	8.170989	1.637505405	5.39515	3.119721216	8.726867814	9.451696104	7.258546
138	3.499049	3.23009789	1.789677	0.169267447	2.49594662	6.180917	3.735125595	2.918211	2.601417756	6.874368103	9.058797202	7.117888
139	8.196275	7.43192946		4.580952291	1.81353348		8.075894445	3.617314	5.061205359	0.042032494	6.999135416	8.131031
135		2.92989104		7.598780748	8.818709957	6.92618	9.537280602	0.786408	9.514975706	7.779556812	0.322243354	0.483787
141	3.974978	9.42069521	4.47389	9.236100659	9.705167257	5.387456	7.336025483	3.350479	5.051634479	1.38862963	4.078863699	6.571039
142	6.942841	4.05280869		7.352649751	8.578645431	4.904799	0.94506573	8.736112	5.370296636	9.576332201	1.478694343	1.18432
143	0.055215	2.92215554	7.201691	9.754246354	7.992910784	1.133312	4.115105395	6.1877	2.009615845	6.376821677	8.116889649	6.807343
144	7.547218	1.31105242	5.801856	5.097103563	2.546016345	2.024231	0.628066989	6.129087	7.159446483	7.113419434	9.820552865	7.002882
145	9.069703	4.51681061	5.101977	0.319859779	4.118153676	3.528439	0.828337978	6.63499	2.211782512	3.751095757	5.849330776	4.740805
146	7.619358	5.63619059		3.317743087	3.86590673	6.49E-04	0.511300811	2.256925	8.550028517	9.890313242	4.987951687	0.043115
147	2.020071	1.03768411	2.375772	8.675963266	6.943457422	0.240231	8.680526173	3.61455	2.181581849	7.631758418	7.12224558	6.602674
148	4.763885	3.01628308		2.517262976	9.419268402	9.886724	9.61307567	6.643655	8.593966964	6.807060985	0.32162979	0.888649
148	7.969316	9.05723545		4.36353792	0.92303881	0.42498	7.660425983	8.291947	9.576012405	4.477152426		4.024653
											9.104342636	
150	0.974987	5.15299984		8.693150167	4.513654547	8.929129	2.802242661	4.211459	2.790592836	4.813088205	2.35701673	5.658690
151	4.74223	2.86251371	5.487489	5.613293664	3.509662662	0.287866	6.623495774	9.658775	2.134608298	3.123717903	7.634916819	1.709233
101	6.825284	5.82268872	5.835951	2.794847346	5.029420471	6.680931	5.990474627	9.476799	7.388354215	3.182540017	7.164324386	2.142270
		6.46787394		5.536205295	3.461501981	6.327849	3.337364527	7.952747	8.06631859	9.003327714	0.704714328	7.574886
152	3 921000			3.330203293	3.401301301	0.32/049	3.337304327	1.552141	0.00031033	2.003327714	0.704714328	
152 153	3.921099				2 426024265	7 162575	0.602010655	4 000000	6 ODEE TO A CT	0 5 40 7 6 5 1 1		
152	3.921099 7.088758 7.18935	3.70725328	1.366155	2.772161922 8.854196236	2.426981281 3.32977999	7.163573	0.693910682	4.803228 6.557352	6.925576167 4.151730837	9.540765749 6.939837997	0.679879946 0.22422257	7.510870 2.413987

156	4 544086	5.67134013	1.822837	6.171257541	0.249343876	1.350787	8.723109613	0.276391	2.120561923	1.572561336	3.102290098	5.650417108
157	5.134917	9.20171931	5.444624	5.202276921	4.557123908	4.73412	8.029860169	1.635748	0.301047371	0.713289325	9.274120205	0.149985587
158		0.5349138	2.346717	9.575820646	0.199223128	4.459363	4.320798398	6.64451	9.436300413	1.24701729	7.235867457	6.967992119
150	0.198339	0.82291223	7.908488	0.47338899	1.080739767	4.537807	9.923415081	1.717355	7.709290584	6.430795761	8.86447011	5.528836287
155	0.816827	0.26426886	6.601383	2.99965184	5.955373675	4.512469	9.849753196	9.048322	1.732703224	1.992041541	9.901922478	0.321093112
160	5.165223	3.63567122	7.965111	5.378516418	1.303216387	6.663507	4.877103452	5.725591	7.372601926	0.394164337	8.167180685	2.24871206
		5.02559192			0.698451169				8.303451454			
162	9.115719		3.323646	1.489960104		2.82966	3.280860058	2.918816		5.545758381	9.411082845	3.34923254
163	8.991622	1.82600435	6.445745	9.624848169	6.862681939	1.753378	7.304300883	1.622862	3.262641435	7.998289168	6.450974242	6.248506927
164	7.696337	8.96529778	6.918573	0.481223114	2.079042569	7.83946	2.542814409	5.8261	1.85528886	5.110244658	0.95810667	9.476694476
165	5.753807	2.88289937	5.987377	0.297775232	4.305121531	4.710439	0.6460093	0.72171	0.495722484	5.78018749	1.166551232	0.172842378
166	9.661803	2.05873318	2.435088	5.037074176	5.9720967	1.657493	7.225095975	0.501515	4.361255831	7.249914139	3.682243006	2.875171259
167	6.976343	0.73918602	6.330903	6.248326544	5.943140463	3.812763	6.91549127	6.692839	0.381348956	4.271270069	1.335034621	1.348614011
168	8.974777	8.46790066	4.273401	9.128009683	7.871628969	3.883673	1.286151486	6.417149	5.598524351	2.932971706	6.20493603	5.055867038
169	5.766426	9.77935424	4.748429	3.772647036	3.691737176	3.793573	5.055740949	7.97166	7.19950157	0.146383906	6.524560337	6.291284214
170	9.689832	6.04033808	8.256206	9.017693989	0.892375531	0.110522	8.076671667	5.787962	0.114964063	0.836729485	2.5426102	1.988815841
171	5.226204	1.83854724	7.636807	7.516853816	3.223489296	6.007053	7.415157462	7.361301	3.251758387	5.329923819	1.103753246	5.560104929
172	0.277102	3.74211864	5.321542	3.07852048	9.922356756	8.67182	8.067337099	6.663655	5.561459642	5.059367631	3.38176053	9.865183179
173	7.092746	7.11748999	2.766273	9.397913364	0.509860173	1.432633	0.43774752	0.544354	0.378866422	1.385699798	9.388757948	8.358426736
174	6.455489	1.73134053	4.302876	8.74228196	8.029635488	9.573626	9.751458545	1.808511	8.140594158	7.641412262	2.439170548	2.125043417
175	6.938268	0.31641728	9.85193	5.104141862	2.745337189	4.713618	6.586617317	3.496754	5.363650562	5.513344437	6.910668	2.692672169
176	7.072959	1.63388245	0.943856	9.535036838	9.441777541	4.621266	0.011925487	9,642062	7.374235251	0.645487537	7.810639806	4,123623273
177	3.427889	7.32720791	3.43011	5.28886523	6.226254986	1.603186	6.575367203	7.650249	9.976343251	0.786191648	4.887074189	4.132144665
178	6.15719	5.4763487	0.500151	1.373480293	1.617702187	9.175789	4.191335185	8.852417	0.656598816	6.224730919	0.292166439	3.91459603
178	3.862073	2.75323414	1.285758	7.415261389	4.322138715	2.681979	0.079483443	6.436124	1.809017882	6.536310074	1.555746914	0.628528975
1/5	4.735765	0.1639204	4.713891	6.546527713	0.605076252	9.337207	0.732979277	4.024197	8.965628227	8.286839752	6.249462969	4.857292844
180	0.715164	9.24348747	2.611611	5.023286237	4.98619644	2.75314	6.553383232	0.579992	1.332495174	3.820591954	4.197109036	7.741955759
182	5.47143	8.77152857	8.468836	6.509876146	0.164747521	5.661601	5.773544143	7.277689	4.640319814	9.596508463	0.98254153	5.029484664
183	2.216022	1.18015889		7.300919081	3.961363995	5.305306	6.809107933	5.379086	2.044833658	7.142512247	7.218368471	4.669273484
184	3.810866	0.05976339	2.564024	5.128693161	7.345742187	6.683075	9.827309743	3.434303	3.937547417	0.924704236	9.105713361	9.328764354
185	8.703433	5.35212279	0.427484	1.738084478	3.013553861	2.410479	8.246740362	7.009956	1.323499776	3.668773547	3.785409961	7.275412287
186	1.097663	7.25299264	2.454196	3.066278274	9.265165793	4.843986	9.723849486	0.451512	4.957793169	8.025788237	3.3198115	7.409845626
187	8.936091	2.74201974	6.487522	2.465110793	2.135152381	2.597063	8.597635588	7.671908	8.208007304	9.336050694	4.26449209	6.892401299
188	8.000425	6.35318078	6.826786	1.292734083	6.898250518	0.158644	2.420594219	6.060107	1.930085803	0.586101776	9.32905272	6.624882492
189	1.558855	8.96943638	7.051076	2.927266205	7.086316851	7.969939	2.688962881	9.712583	3.296917965	1.914331491	3.676411276	8.880882241
190	3.360395	2.14212906	8.004032	8.241825422	8.482390147	5.673642	4.038195682	7.845996	1.383680669	9.029774709	7.44232387	6.458011299
191	5.244438	6.9408677	1.506789	2.777882443	4.162446986	0.156804	5.907559118	5.605623	4.119550772	1.359953438	0.879301108	0.160344534
192	2.030864	6.98671147	9.51743	5.947015953	4.609100933	5.075421	3.446731089	1.012361	3.675189591	8.284867043	5.646604837	4.778829545
193	1.769608	7.18879335	7.050858	9.396146734	9.382788838	5.717039	4.984643392	5.211381	4.521776212	9.88971322	4.097048552	1.327455162
194	0.980603	7.95188854	6.099093	6.916074143	8.799533718	9.571965	8.607020301	3.206514	4.108795876	6.807477144	2.353826766	6.943747131
195	3.480638	7.72363855	9.691816	6.019381293	9.983191137	1.286085	8.598743796	0.761549	7.976308128	8.029940663	4.419177189	4.22375111
196	1.539396	2.29678562	1.725699	5.840880014	6.068766686	5.286445	9.442503904	2.976135	3,563953503	7.741358393	2.463019532	4.366692599
190	5.693483	2.11619842	4.126237	3.04739628	9.167505784	7.931077	5.666694363	7.734896	5.386667818	8.490023027	1.14188274	6.417785456
197	5.505554	9.83812417	1.346934	0.174544918	0.074201536	7.098087	9.738326324	0.415025	6.365904052		8.364718819	7.835317611
198	4,90577		0.261596							1.870315427		
		8.2731061		1.208338349	6.435242802	1.604867	0.532468622	0.657889	7.402427892	9.783595399	9.331943768	7.972045122
200		3.97725438	8.29924	6.737430255	9.46280732	2.307726	4.046820298	9.558455	7.992011813	7.720911974	8.71810497	3.395736309
201	1.022124	9.91919981	8.316159	4.70772057	2.77225937	1.004404	0.44789194	3.950906	7.909652715	3.933835371	1.214897733	4.917265265
202	5.575562	6.37265397	9.071096	9.839030813	1.185761986	1.256964	3.090074206	0.188325	2.150173459	7.920777239	5.583301963	1.054246169
203	0.769735	2.26952825	8.990192	6.607567034	3.787242325	7.020785	9.551111943	1.484319	9.019086868	2.869569551	3.261896078	6.308134053
204	2.499982	4.67597905	9.628048	0.832201942	3.198602389	9.561105	2.114500265	6.410738	3.499438286	6.746231761	3.278016193	2.491032941
205	6.17195	4.5277907	0.773615	5.049682618	2.126441067	5.923509	4.177556727	4.401564	2.266319522	1.920051694	0.92796519	4.742993918
206	3.208152	8.71980027	7.660642	1.864302333	9.127824182	1.80429	3.149403547	4.081267	1.668861915	7.141534431	6.2918201	7.247333314
207	6.324701	6.61107862	0.034563	7.75102698	9.735744904	5.718093	9.879681953	5.057219	5.989801953	4.478394492	2.536212089	2.36045818
208	9.90367	9.73845556	5.278782	4.077196529	1.334868647	2.17343	1.387791686	3.690751	4.786031977	5.706476447	5.031689967	3.88905472
209	9.160685	0.45294092	7.029188	8.821374175	8.702242355	6.178125	0.488059895	8.312152	3.997443325	2.913039232	3.872297971	8.048594945
210	6.594573	5.21573076	9.390816	5.261668351	7.175626612	7.765349	2.835653322	8.40755	7.125523243	6.981269078	6.044008404	5.077705456
211	7.672699	7.11436836	9.700073	9.401445582	8.34251093	4.960034	2.325475794	7.786349	6.109994389	8.305925964	0.621913021	5.794408515
212	7.526082	0.78627939	7.47974	5.524847221	2.124320538	3.284492	0.014490301	3.727707	9.059809873	8.46589485	1.772424089	2.561288352
213	8.889708	7.12785183	8.309382	5.067341863	4.164080976	7.19779	2.102155546	9.510573	1.325258523	6.88399593	8.228039177	6.546001727
214	6.530542	1.18001034	5.083775	4.82118537	6.447482202	6.05872	2.556094543	9.645775	6.727223645	1.259774221	5.635342491	9.257365444
215	4.352924	0.56206202	5.210397	4.224448687	8.467921977	3.937862	8.794726687	4.414539	9.933298854	8.042405975	8.34763054	5.846463734
	6.015027	6.00450502	6.021757	0.07105600	2.075545-1	1 1 4 5 9 5 7	2 0507470	2.965265	0.96500575	7.007400770	2 165103051	0.01010070
216	6.015627	6.80458562	6.021757	0.074056304	3.07554561	1.146247	2.85974704	3.865399	9.86598579	7.967422753	3.165197156	2.91788396
217		5.42897612	1.930545	3.807390038		5.760989	8.070981887	2.571649	1.587439475	6.744682601	9.53846496	9.92291898
218	6.542563	7.43134804	5.449049	5.328131743	9.681391071	2.602105	4.107752018	4.666025	5.398957576	5.963731325		6.57692308
219				0.154602902						8.594571271	2.70200273	3.37822485
220				8.080519969	9.348362338		9.529350677	0.38212	0.545666197	5.531750695	9.633530723	9.98080318
221	2.86606			2.735570081	8.445204796	7.480207	3.323889643	9.989759	8.190461635	5.930374715	1.149107175	0.54474096
222				2.2056898	0.862378551	8.576355	1.195635118	3.692319	6.597661295	5.465890274		8.53388406
223				7.930725888			4.801095932	5.807428		7.475201618		9.73386064
224	1.874368			0.186144102	1.017632764		2.305469807	9.122435	4.787946419	4.069935919	0.845397813	9.66788659
225		4.66534294		5.90988	9.926664575	5.436939	2.835097389	3.185295	4.68909451	7.122081751	0.798426613	8.77228389
226	1.252459	2.27368514	0.351108	8.564615429	9.46307026	8.635129	5.027158737	1.30886	0.838919878	8.074206773	9.616357426	3.8190786
227	3.461292	8.0638508		0.092273166	8.838341211	0.613613	4.397325396	7.579402	5.2022914	1.733942208	7.655930082	1.48329427
228	0.803365	1.41540272	7.541408	3.427420367	8.773708275	4.389826	2.791551952	6.02471	9.366045911	1.757715988	4.635885966	8.89370859
229	1.861533	0.65675478		0.123896138	7.816668715	3.323884	7.448487443	2.464871	0.616353322	5.943789797	5.645502373	7.18177450
230	1.06173	4.72508304		1.50199212	3.499469695	9.7714	0.444484524	1.023077	3.082668797	0.80382196		3.89151811
231		8.41589004		2.855563812	2.940497194		6.591545995	7.085994	8.308467033	9.055198667	3.439889527	9.24479939
232	0.338983	7.04977127	2.206344	5.20022107	6.973386445	0.207066	1.971270306	6.089622	2.087571638	1.362260913	9.675026068	2.57004928
232	2.312584	0.38340886		3.684764143	7.413136008	2.047271	0.950697854	3.682168	4.518317608	5.628686547	9.631521376	8.74110731
200			2.221247	1.165001464		9.288406					1.443073868	
234				1.100001404	1.355857881	1 21200400	5.370964759	1.916047	2.969897628	2.063593943	1 1.1130/3000	0.1551666
234 235		1.0447512	6.848124	2.728060739	3.734454522	8.220609	8.538993626	9.126569	4.435091251	5.213346943	3.996127943	5.70449

300	9.270092	5.22444746	8.250329	7.493193272	6.581420495	9.994891	0.7762406	5 2.23540	1 6.57155086	0.23837295	5 7.69826048	8.72767561
299	3.253646	4.37706763				9.409218		-		5.63205802		9.2964960
298	2.900346	6.05503165		1.184782126		-				6.52548576		9.61220028
297	4.971668	6.19539432		0.439562441	9.847846906			-		6.16670869	-	8.92778739
296	1.346622	4.65617181		6.998724551	6.684043515					7.8131979		6.86259878
295	9.916913	5.85855155	1.933229	8.344294048	6.084197643		0.45243698		-		-	9.12084077
295		5.85855155	1.933229	8.344294048	6.084197643	6.490153	0.452436987	5.017141	1.465223744	4.655501048	2.241343903	9.120840771
294	4.72574	7.72104646	6.479767	6.756744901	6.944474225	9.630039	0.43079125	4.544153	8.604644305	7.801229883	9.555618491	3.616773607
293	5.044346	7.23656395	4.178831	1.742624206	0.577399259	0.533229	8.55246238	8.067653	2.614376125	4.761009015	0.608253086	4.835960492
292	9.689832	6.04033808	8.256206	9.017693989	0.892375531	0.110522	8.076671667	5.787962	0.114964063	0.836729485	2.5426102	1.988815841
291	5.766426	9.77935424	4.748429	3.772647036	3.691737176	3.793573	5.055740949	7.97166	7.19950157	0.146383906	6.524560337	6.291284214
200	8.974777	8.46790066	4.273401	9.128009683	7.871628969	3.883673	1.286151486	6.417149	5.598524351	2.932971706	6.20493603	5.055867038
289	6.976343	0.73918602	6.330903	6.248326544	5.943140463	3.812763	6.91549127	6.692839	0.381348956	4.271270069	1.335034621	1.348614011
287	9.661803	2.05873318	2.435088	5.037074176	5.9720967	1.657493	7.225095975	0.501515	4.361255831	7.249914139	3.682243006	2.875171259
280	5.753807	2.88289937	5.987377	0.297775232	4.305121531	4.710439	0.6460093	0.72171	0.495722484	5.78018749	1.166551232	0.172842378
285	7.696337	8.96529778	6.918573	0.481223114	2.079042569	7.83946	2.542814409	5.8261	1.85528886	5.110244658	0.430374242	9.476694476
284	8.991622	1.82600435	6.445745	9.624848169	6.862681939	1.753378	7.304300883	1.622862	3.262641435	7.998289168	6.450974242	6.248506927
283	9.115719	5.02559192	3.323646	1.489960104	0.698451169	2.82966	3.280860058	2.918816	8.303451454	5.545758381	9.411082845	3.34923254
282	5.165223	3.63567122	7.965111	5.378516418	1.303216387	6.663507	4.877103452	5.725591	7.372601926	0.394164337	8.167180685	2.24871206
281	0.198339	0.82291223	6.601383	2.99965184	5.955373675	4.537807	9.923415081	9.048322	1.732703224	1.992041541	9.901922478	0.321093112
280		0.5349138 0.82291223	7.908488	9.575820646	0.199223128	4.459363	4.320798398 9.923415081	6.64451 1.717355	9.436300413	6.430795761	8.86447011	5.528836287
279	5.134917 0.91711		2.346717	5.202276921 9.575820646	4.55/123908	4.73412		1.635748 6.64451	9.436300413	0./13289325	9.274120205	0.149985587
278	4.544086	9.20171931	1.822837	6.1/125/541 5.202276921	0.249343876	4.73412	8.029860169	0.276391	0.301047371	1.572561336 0.713289325	3.102290098 9.274120205	5.650417108 0.149985587
277 278	7.18935	0.13755756 5.67134013	8.568331 1.822837	8.854196236 6.171257541	3.32977999 0.249343876	7.193377	7.028723581 8.723109613	6.557352 0.276391	4.151730837 2.120561923	6.939837997	0.22422257 3.102290098	2.413987912
276	7.088758	3.70725328	1.366155	2.772161922	2.426981281	7.163573	0.693910682	4.803228	6.925576167	9.540765749	0.679879946	7.510870679
275	3.921099	6.46787394		5.536205295	3.461501981	6.327849	3.337364527	7.952747	8.06631859	9.003327714	0.704714328	7.574886706
274	-	5.82268872		2.794847346	5.029420471	6.680931	5.990474627	9.476799	7.388354215	3.182540017	7.164324386	2.142270101
272	4.74223	2.86251371	5.487489	5.613293664	3.509662662	0.287866	6.623495774	9.658775	2.134608298	3.123717903	7.634916819	1.709233023
271	7.969316 0.974987	9.05723545 5.15299984	7.71413 7.946764	4.36353792 8.693150167	0.92303881 4.513654547	0.42498 8.929129	7.660425983 2.802242661	8.291947 4.211459	9.576012405 2.790592836	4.477152426 4.813088205	9.104342636 2.35701673	4.024653007 5.658690117
270		3.01628308		2.517262976	9.419268402	9.886724	9.61307567	6.643655	8.593966964	6.807060985	0.32162979	0.888649369
269		1.03768411	2.375772	8.675963266	6.943457422	0.240231	8.680526173	3.61455	2.181581849	7.631758418	7.12224558	6.602674678
268		5.63619059		3.317743087	3.86590673	6.49E-04	0.511300811	2.256925	8.550028517	9.890313242	4.987951687	0.043115034
200	9.069703	4.51681061	5.101977	0.319859779	4.118153676	3.528439	0.828337978	6.63499	2.211782512	3.751095757	5.849330776	4.740805718
265 266	0.055215	2.92215554 1.31105242	7.201691 5.801856	9.754246354 5.097103563	7.992910784 2.546016345	1.133312 2.024231	4.115105395 0.628066989	6.1877 6.129087	2.009615845	6.376821677 7.113419434	8.116889649 9.820552865	6.807343284 7.002882598
264	010 120 12	4.05280869	8.786417	7.352649751	8.578645431	4.904799	0.94506573	8.736112	5.370296636	9.576332201	1.478694343	1.18432611
263	3.974978	9.42069521	4.47389	9.236100659	9.705167257	5.387456	7.336025483	3.350479	5.051634479	1.38862963	4.078863699	6.571039307
261	5.98054	2.92989104	2.77179	7.598780748	8.818709957	6.92618	9.537280602	0.786408	9.514975706	7.779556812	0.322243354	0.483787082
260 261	2.906056	0.70132102	6.845965 3.528114	0.470872536 9.907299317	5.363939954 8.769660256	9.310562 9.106519	4.021467553 5.437446632	9.209169	3.629061852 1.384545898	3.952462214 3.309138432	6.939220423 6.405829864	2.686583353 0.387727939
259	3.022133	7.22257052	9.476761	4.581970363	8.397184238	7.871425	3.97482921	1.740935	9.060558215	7.560222333	7.564317709	1.846819807
258	6.745355	7.40925491	1.090489	6.667677508	7.248439269	9.650459	8.343980953	2.285766	3.290800454	6.11902538	6.495690754	3.576467971
250	1.218691	6.91665078	5.130591	4.988541206	7.613462545	1.621048	9.607116948	2.508699	6.240953115	1.867174743	2.972397053	1.278255502
255	7.03189	1.0447512	6.848124	2.728060739	3.734454522	9.288406	8.538993626	9.126569	4.435091251	5.213346943	3.996127943	5,70449885
254 255	2.312584 2.081544	0.38340886	5.041337 2.221247	3.684764143 1.165001464	7.413136008	2.047271 9.288406	0.950697854 5.370964759	3.682168	4.518317608 2.969897628	5.628686547 2.063593943	9.631521376 1.443073868	8.741107318 0.15516669
253	0.338983	7.04977127	2.206344	5.20022107	6.973386445	0.207066	1.971270306	6.089622	2.087571638	1.362260913	9.675026068	2.570049285
252	7.826105	8.41589004	2.360213	2.855563812	2.940497194	5.222751	6.591545995	7.085994	8.308467033	9.055198667	3.439889527	9.244799393
250	1.06173	4.72508304	0.655248	1.50199212	3.499469695	9.7714	0.444484524	2.464871	3.082668797	0.80382196	9.179952745	3.891518112
249 250	0.803365	1.41540272 0.65675478	7.541408 0.655248	3.427420367 0.123896138	8.773708275 7.816668715	4.389826 3.323884	2.791551952 7.448487443	6.02471 2.464871	9.366045911 0.616353322	1.757715988 5.943789797	4.635885966 5.645502373	8.893708592 7.181774506
248		8.0638508	3.149146	0.092273166	8.838341211	0.613613	4.397325396	7.579402	5.2022914	1.733942208	7.655930082	1.483294275
247		2.27368514	0.351108	8.564615429	9.46307026	8.635129	5.027158737	1.30886	0.838919878	8.074206773	9.616357426	3.81907864
243		4.66534294	1.190278	5.90988	9.926664575	5.436939	2.835097389	3.185295	4.68909451	7.122081751	0.798426613	8.772283894
244 245	3.282366	1.6392956 2.99335597	6.750087 6.148718	7.930725888 0.186144102	8.076149198 1.017632764	3.872717 6.180857	4.801095932 2.305469807	5.807428 9.122435	0.089315696 4.787946419	7.475201618 4.069935919	1.850609441 0.845397813	9.733860642 9.667886595
243	0.023118	7.4346026	4.726612	2.2056898	0.862378551	8.576355	1.195635118	3.692319	6.597661295	5.465890274	7.820979624	8.533884062
242	2.86606	5.59830122	6.056773	2.735570081	8.445204796	7.480207	3.323889643	9.989759	8.190461635	5.930374715	1.149107175	0.544740961
241	3.356192	2.21142343	0.017197	8.080519969	9.348362338	7.438448	9.529350677	0.38212	0.545666197	5.531750695	9.633530723	9.980803183
239 240	2.906056	0.70132102	6.845965 3.528114	0.470872536	5.363939954	9.310562	4.021467553	9.209169	3.629061852	3.952462214 3.309138432	6.939220423 6.405829864	2.686583353
	3.022133	7.22257052	9.476761	4.581970363	8.397184238	7.871425	3.97482921	1.740935	9.060558215	7.560222333	7.564317709	1.846819807
238												

Figure 2: COVID-19 Dataset (Negative Cases) Source: https://storage.googleapis.com/kagglesdsdataset/ einsteindata4u/covid19/%2F558703/ datasets_5740763456_104031167855_dataset.xlsx

6/N	fever	dry cough	tiredness	aches & pains	sore throat	diarrhoea	conjunctivitis	headache	loss of taste	difficulty breathing	chest pain	rash on skir
1	5.044345647		4.1788309	1.742624206	0.577399259	0.53322873	8.55246238		2.614376125	4.761009015	0.60825309	4.8359604
2	4.72574012		6.4797668	6.756744901	6.944474225	9.63003905	0.43079125	4.54415289	8.604644305	7.801229883	9.55561849	3.6167736
3			1.9332285	8.344294048	6.084197643	6.4901534		5.01714078	1.465223744	4.655501048	2.2413439	9.1208407
4			0.6386411	6.998724551	6.684043515		3.517831461	0.2842164	0.080606391	7.81319792	8.32840763	6.8625987
5	4.971668411	6.1953943	6.9510447	0.439562441	9.847846906	6.17268544		8.00491842	5.457925638	6.166708692	6.66686623	8.927787
6	2.900346258		4.9473191	1.184782126	9.06526319		2.585753531	6.9073843	8.84476862	6.525485763	3.23296021	9.6122002
7	3.253646014	4.3770676	1.7346956	2.48499186	1.937542667	9.40921829	7.068173058	3.19781567	9.505394955	5.632058022	4.00760755	9.2964960
8			8.2503285	7.493193272	6.581420495				6.57155086	0.238372955	7.69826048	8.7276756
9	9.52042692	8.9006656	9.8421789	5.79019256	4.238538575	8.10329401	7.902244333	7.51826518	1.060267671	9.523707543	6.81720153	8.0973174
10	4.050406986	1.3354212	1.3557973	6.048756841	1.240710916	3.46009797	1.38337672	3.97920539	4.107974018	6.60918729	3.01539697	8.4983826
11	7.235681849		3.4654766	5.334274276	5.264960755	8.20591914			5.151090465	0.0152317	8.0045012	5.1437264
12	8.061062339		3.5513223	8.307061458	5.567525955	8.12584609	1.298965243	6.41169781	9.150857565	2.725580465	9.29611555	9.621281
13	9.894338971		2.1466417	0.694847571	4.598381636				1.838133262	1.027093465	4.42227195	4.6046651
14	5.460001673	5.133503	7.7609252	4.615070528	0.688135331			1.30880813	1.11854162	6.267888487	6.04091796	4.4824858
15	6.466382939	1.9956714	0.9388178	4.909611876	2.359353865	5.79361045	6.513359593	8.61999614	2.496809182	7.039119144	9.20089922	7.6727741
16	7.506680493		4.9510788	5.238277035	5.000026445	2.42932534			2.151685199	5.356157621	9.51606708	7.1624236
17	2.269919497	4.6321493	6.859791	5.128297413	9.662512308	l	1.637505405	5.39515019	3.119721216	8.726867814	9.4516961	7.2585463
18			1.7896772	0.169267447	2.49594662			1			9.0587972	7.117888
19			6.8742971	4.580952291	1.81353348					0.042032494	6.99913542	8.131031
20		2.929891	2.7717897	7.598780748							0.32224335	0.483787
21	3.974977636		4.4738901	9.236100659	9.705167257	1				1.38862963	4.0788637	6.571039
22			8.7864172	7.352649751	8.578645431			-			1.47869434	
23			7.2016915	9.754246354						6.376821677	8.11688965	6.8073433
24	7.547218306	1.3110524	5.8018561	5.097103563	2.546016345	2.02423136	0.628066989	6.12908699	7.159446483	7.113419434	9.82055286	7.00288
25	9.069702512	4.5168106	5.1019769	0.319859779	4.118153676	3.52843919	0.828337978	6.63498957	2.211782512	3.751095757	5.84933078	4.740805
26	7.619357726	5.6361906	7.5424607	3.317743087	3.86590673	6.49E-04	0.511300811	2.25692514	8.550028517	9.890313242	4.98795169	0.043115
27	2.020071474	1.0376841	2.3757722	8.675963266	6.943457422	0.24023113	8.680526173	3.61454975	2.181581849	7.631758418	7.12224558	6.602674
28	4.763884917	3.0162831	4.9217058	2.517262976	9.419268402	9.88672388	9.61307567	6.6436551	8.593966964	6.807060985	0.32162979	0.8886493
29	7.969316247	9.0572354	7.7141297	4.36353792	0.92303881	0.42498005	7.660425983	8.29194672	9.576012405	4.477152426	9.10434264	4.0246530
30	0.974987267	5.1529998	7.9467639	8.693150167	4.513654547	8.92912895	2.802242661	4.211459	2.790592836	4.813088205	2.35701673	5.6586903
31	4.742230435	2.8625137	5.4874886	5.613293664	3.509662662	0.28786559	6.623495774	9.65877455	2.134608298	3.123717903	7.63491682	1.7092330
32	6.825283902	5.8226887	5.8359508	2.794847346	5.029420471	6.68093122	5.990474627	9.47679942	7.388354215	3.182540017	7.16432439	2.14227
33	3.921098551	6.4678739	1.7256964	5.536205295	3.461501981	6.32784858	3.337364527	7.95274749	8.06631859	9.003327714	0.70471433	7.574886
34	7.088757502	3.7072533	1.3661549	2.772161922	2.426981281	7.16357286	0.693910682	4.8032277	6.925576167	9.540765749	0.67987995	7.510870
35	7.189350056	0.1375576	8.5683309	8.854196236	3.32977999	7.19337672	7.028723581	6.55735199	4.151730837	6.939837997	0.22422257	2.413987
36	4.544085818	5.6713401	1.8228371	6.171257541	0.249343876	1.35078693	8.723109613	0.27639059	2.120561923	1.572561336	3.1022901	5.650417
37	5.134916512	9.2017193	5.4446239	5.202276921	4.557123908	4.73411955	8.029860169	1.6357483	0.301047371	0.713289325	9.2741202	0.149985
38	0.917110197	0.5349138	2.3467175	9.575820646	0.199223128	4.45936264	4.320798398	6.64451009	9.436300413	1.24701729	7.23586746	6.967992
39	0.198338736	0.8229122	7.9084875	0.47338899	1.080739767	4.53780687	9.923415081	1.71735512	7.709290584		8.86447011	5.528836
40	0.816826625	0.2642689	6.6013833	2.99965184								
41	5.165222688	3.6356712	7.9651106	5.378516418			4.877103452	5.72559084	7.372601926	0.394164337	8.16718068	3 2.248712
42	9.115719183	5.0255919	3.3236456	1.489960104	0.698451169	2.82965967	3.280860058	2.91881559	8.303451454	5.545758381	9.41108284	1 3.349232
43	8.991622428	1.8260043	6.445745	9.624848169	6.862681939	1.75337828	7.304300883	1.62286209	3.262641435	7.998289168	6.45097424	6.248506
44	7.696336529	8.9652978	6.9185729	0.481223114	2.079042569	7.83945988	2.542814409	5.82609987	1.85528886	5.110244658	0.9581066	9.476694
45	5.753807329	2.8828994	5.9873767	0.297775232	4.305121531	4.71043944	0.6460093	0.72170996	0.495722484	5.78018749	1.16655123	0.172842
46	9.66180268	2.0587332	2.4350877	5.037074176	5.9720967	1.65749258	7.225095975	0.50151499	4.361255831	7.249914139	3.68224301	1 2.875171
47	6.976342622	0.739186	6.3309028	6.248326544	5.943140463	3.812763	6.91549127	6.69283899	0.381348956	4.271270069	1.33503462	2 1.348614
48	8.974777264	8.4679007	4.273401	9.128009683	7.871628969	3.88367321	1.286151486	6.41714922	5.598524351	2.932971706	6.20493603	3 5.055867
49	5.766426066	9.7793542	4.7484286	3.772647036	3.691737176	3.7935729	5.055740949	7.97166021	7.19950157	0.146383906	6.52456034	6.291284
50	9.689831647	6.0403381	8.2562062	9.017693989	0.892375531	0.11052176			0.114964063	0.836729485	2.5426102	2 1.988815
51	5.226203523	1.8385472	7.636807	7.516853816	3.223489296	6.0070534	7.415157462	7.36130137	3.251758387	5.329923819	1.10375325	5.560104
52	0.277101696	3.7421186	5.3215422	3.07852048	9.922356756	8.67181979	8.067337099	6.66365531	5.561459642	5.059367631	3.38176053	9.865183
53	7.092746422	7.11749	2.7662734	9.397913364					0.378866422			
54	6.455488534	1.7313405	4.3028756	8.74228196	8.029635488	9.57362557	9.751458545	1.80851056	8.140594158	3 7.641412262	2.43917055	5 2.125043
55	6.938267908	0.3164173	9.8519301	5.104141862	2.745337189							
56	7.07295917	1.6338825	0.9438556	9.535036838	9.441777541	4.62126554			7.374235251	0.645487537	7.81063981	4.123623
57	3.427889076	7.3272079	3.4301096	5.28886523	6.226254986							-

58												
+	6.157189925	5.4763487	0.5001507	1.373480293	1.617702187	9.17578944	4.191335185	8.85241749	0.656598816	6.224730919	0.29216644	3.91459603
59	3.862072505	2.7532341	1.2857577	7.415261389	4.322138715	2.681979	0.079483443	6.43612392	1.809017882	6.536310074	1.55574691	0.62852898
60	4.735765265	0.1639204	4.7138913	6.546527713	0.605076252	9.33720742	0.732979277	4.024197	8.965628227	8.286839752	6.24946297	4.85729284
61	0.715163836	9.2434875	2.6116108	5.023286237	4.98619644	2.75314029	6.553383232	0.57999203	1.332495174	3.820591954	4.19710904	7.74195576
62	5.471429721	8.7715286	8.4688364	6.509876146	0.164747521	5.66160137	5.773544143	7.27768883	4.640319814	9.596508463	0.98254153	5.02948466
63	2.216022179	1.1801589	7.8120693	7.300919081	3.961363995	5.30530636	6.809107933	5.37908569	2.044833658	7.142512247	7.21836847	4.66927348
64	3.810866082	0.0597634	2.5640239	5.128693161	7.345742187	6.68307501	9.827309743	3.43430271	3.937547417	0.924704236	9.10571336	9.32876435
65	8.703432705	5.3521228	0.4274845	1.738084478	3.013553861	2.4104786	8.246740362	7.00995636	1.323499776	3.668773547	3.78540996	7.27541229
66	1.097662795	7.2529926	2.4541957	3.066278274	9.265165793		9.723849486	0.45151174	4.957793169	8.025788237	3.3198115	7.40984563
67	8.936090582	2.7420197	6.4875222	2.465110793	2.135152381		8.597635588	7.67190787	8.208007304	9.336050694	4.26449209	6.8924013
68	8.000425086	6.3531808		1.292734083	6.898250518		2.420594219	6.06010697	1.930085803	0.586101776	9.32905272	6.62488249
			6.826786									
69	1.558855486	8.9694364	7.0510756	2.927266205	7.086316851	7.96993857	2.688962881	9.71258274	3.296917965	1.914331491	3.67641128	8.88088224
70		2.1421291	8.0040322	8.241825422	8.482390147		4.038195682	7.84599584	1.383680669	9.029774709	7.44232387	6.4580113
71	5.244438367	6.9408677	1.5067895	2.777882443	4.162446986			5.60562279	4.119550772	1.359953438	0.87930111	0.16034453
72	2.030864205	6.9867115	9.5174303	5.947015953	4.609100933	5.0754207	3.446731089	1.01236133	3.675189591	8.284867043	5.64660484	4.77882954
73	1.769607938	7.1887933	7.0508584	9.396146734	9.382788838	5.71703922	4.984643392	5.21138094	4.521776212	9.88971322	4.09704855	1.32745516
74	0.980602993	7.9518885	6.0990932	6.916074143	8.799533718	9.57196461	8.607020301	3.20651437	4.108795876	6.807477144	2.35382677	6.94374713
75	3.480638347	7.7236385	9.6918163	6.019381293	9.983191137	1.28608528	8.598743796	0.76154941	7.976308128	8.029940663	4.41917719	4.22375111
76	1.5393959	2.2967856	1.7256994	5.840880014	6.068766686	5.28644549	9.442503904	2.97613455	3.563953503	7.741358393	2.46301953	4.3666926
77	5.693483486	2.1161984	4.1262374	3.04739628	9.167505784		5.666694363	7.73489617	5.386667818	8.490023027	1.14188274	6.41778546
78	· · · · · · · · · · · · · · · · · · ·		1.3469343	0.174544918		7.09808705		0.41502524	6.365904052	1.870315427	8.36471882	7.83531761
79		8.2731061	0.261596	1.208338349	6.435242802	1.60486674	0.532468622	0.65788904	7.402427892	9.783595399	9.33194377	7.97204512
80												
			8.2992402	6.737430255	9.46280732	2.30772635		9.55845528	7.992011813	7.720911974	8.71810497	3.39573631
81			8.3161591	4.70772057		1.00440375		3.95090632	7.909652715	3.933835371	1.21489773	4.91726526
82	5.575561961		9.0710955	9.839030813	1.185761986	1.2569636	3.090074206	0.18832524	2.150173459	7.920777239	5.58330196	1.05424617
83			8.9901917	6.607567034	3.787242325	7.02078504		1.48431944	9.019086868	2.869569551	3.26189608	6.30813405
84	2.499981596 4	4.6759791	9.6280482	0.832201942	3.198602389	9.56110473	2.114500265	6.41073844	3.499438286	6.746231761	3.27801619	2.49103294
85	6.171950329 4	4.5277907	0.773615	5.049682618	2.126441067	5.92350874	4.177556727	4.40156441	2.266319522	1.920051694	0.92796519	4.74299392
86	3.20815208 8	8.7198003	7.6606416	1.864302333	9.127824182	1.80428966	3.149403547	4.0812668	1.668861915	7.141534431	6.2918201	7.24733331
87	6.324701141 6	6.6110786	0.0345631	7.75102698	9.735744904	5.71809313	9.879681953	5.05721857	5.989801953	4.478394492	2.53621209	2.36045818
88	9.903669662	9.7384556	5.2787815	4.077196529	1.334868647	2.17342977	1.387791686	3.69075129	4.786031977	5.706476447	5.03168997	3.88905473
89	9.160685041 (0.4529409	7.0291881	8.821374175	8.702242355	6.178125	0.488059895	8.3121525	3.997443325	2.913039232	3.87229797	8.04859494
90			9.3908165	5.261668351	7.175626612	7.76534888	2.835653322	8.40754978	7.125523243	6.981269078	6.0440084	5.07770546
91			9.7000733	9.401445582	8.34251093	4.96003411	2.325475794	7.78634901	6.109994389	8.305925964	0.62191302	5.79440852
92			7.4797404	5.524847221	2.124320538	3.2844916	0.014490301	3.7277071	9.059809873	8.46589485	1.77242409	2.56128835
93			8.3093822	5.067341863	4.164080976	7.19779039		9.51057331	1.325258523	6.88399593	8.22803918	6.54600173
93												
			5.0837751	4.82118537	6.447482202	6.05872048	2.556094543	9.64577503	6.727223645	1.259774221	5.63534249	9.25736544
95	4.352924081	0.562062	5.210397	4.224448687	8.467921977	3.93786234	8.794726687	4.41453941	9.933298854	8.042405975	8.34763054	5.84646373
96			6.0217574	0.074056304		1.14624722	2.85974704	3.8653989	9.86598579	7.967422753	3.16519716	2.91788397
97	I	I	1.9305445	3.807390038	1.247948976	5.76098881		2.57164919	1.587439475	6.744682601	9.53846496	9.92291898
97			1.9305445	3.807390038	1.247948976		8.070981887			6.744682601		
98			5.4490495	5.328131743	9.681391071	2.60210469	4.107752018					
99	6.404419464 3	3.6227938	8.1598601	0.154602902	6.149070467	4.65168075	1.600177619	9.57510208	3.16343886	8.594571271	2.7020027	3 3.3782248
100	3.356191817 2	2.2114234	0.0171969	8.080519969	9.348362338	7.43844773	9.529350677	0.38211968	0.545666197	5.531750695	9.6335307	2 9.9808031
101	2.866060335 5	5.5983012	6.0567727	2.735570081	8.445204796	7.48020666	3.323889643	9.98975915	8.190461635	5.930374715	1.1491071	7 0.5447409
102	0.023117537 7	7.4346026	4.726612	2.2056898	0.862378551	8.57635502	1.195635118	3.6923191	6.597661295	5.465890274	7.8209796	2 8.5338840
103		1.6392956	6.7500873	7.930725888	8.076149198	3.8727173	4.801095932					4 9.73386064
104			6.1487181	0.186144102	1.017632764	6.18085722	2.305469807	9.12243457				
104			1.1902779	5.90988	9.926664575	5.43693897	2.835097389	3.18529535	4.68909451	7.122081751		
105			0.3511081	8.564615429	9.46307026	8.635129	5.027158737					-
												+
107			3.1491456	0.092273166	8.838341211	0.61361288	4.397325396					-
108			7.5414083	3.427420367	8.773708275	4.38982622	2.791551952					-
109			0.6552477	0.123896138	7.816668715	3.32388445	7.448487443			5.943789797		
110	1.061729959	4.725083	5.7640208	1.50199212	3.499469695	9.77140042	0.444484524	1.0230772	3.082668797	0.80382196	5 9.1799527	4 3.8915181
111	7.826104538	8.41589	2.3602133	2.855563812	2.940497194	5.22275118	6.591545995	7.08599426	8.308467033	9.055198667	3.4398895	3 9.2447993
112	0.338982502 7	7.0497713	2.206344	5.20022107	6.973386445	0.20706646	1.971270306	6.08962199	2.087571638	1.362260913	9.6750260	7 2.5700492
113	2.312584393 0	0.3834089	5.0413366	3.684764143	7.413136008	2.04727136	0.950697854	3.68216838	4.518317608	5.628686547	9.6315213	8 8.7411073
	2.081543501 8	3.5992968	2.2212475	1.165001464	1.355857881	9.28840639	5.370964759	1.91604654	2.969897628			
114					3.734454522	8.2206088	8.538993626	9.12656895	4.435091251	5.213346943		
	7.031889853 1	1.0447512	6.8481239	2./28060/391								
115			6.8481239 5.1305912	2.728060739 4.988541206								-
	1.218691301 6	5.9166508	6.8481239 5.1305912 1.0904888	2.728060739 4.988541206 6.667677508	7.613462545 7.248439269	1.62104779	9.607116948 8.343980953	2.50869879	6.240953115	1.867174743	3 2.9723970	5 1.278255

118	3.022132531	7.2225705	9.4767606	4.581970363	8.397184238	7.87142528	3.97482921	1.74093512	9.060558215	7.560222333	7.56431771	1.84681981
119	2.906056141	0.701321	6.8459653	0.470872536	5.363939954	9.31056199	4.021467553	9.2091693	3.629061852	3.952462214	6.93922042	2.68658335
120	7.263113231	0.3916695	3.5281141	9.907299317	8.769660256	9.106519	5.437446632	8.65828796	1.384545898	3.309138432	6.40582986	0.38772794
121	3.356191817	2.2114234	0.0171969	8.080519969	9.348362338	7.43844773	9.529350677	0.38211968	0.545666197	5.531750695	9.63353072	9.98080318
122	2.866060335	5.5983012	6.0567727	2.735570081	8.445204796	7.48020666	3.323889643	9.98975915	8.190461635	5.930374715	1.14910717	0.54474096
123	0.023117537	7.4346026	4.726612	2.2056898	0.862378551	8.57635502	1.195635118		6.597661295	5.465890274	7.82097962	8.53388406
124	3.282365591	1.6392956	6.7500873	7.930725888	8.076149198	3.8727173	4.801095932	5.80742757	0.089315696	7.475201618	1.85060944	9.73386064
125	1.874367908	2.993356	6.1487181	0.186144102	1.017632764		2.305469807		4.787946419	4.069935919	0.84539781	9.66788659
126	1.155033567	4.6653429	1.1902779	5.90988	9.926664575	5.43693897	2.835097389		4.68909451	7.122081751	0.79842661	8.77228389
127	1.252458813	2.2736851	0.3511081	8.564615429	9.46307026		5.027158737		0.838919878	8.074206773	9.61635743	3.81907864
128	3.461292308	8.0638508	3.1491456	0.092273166	8.838341211	0.61361288	4.397325396	7.5794016	5.2022914	1.733942208	7.65593008	1.48329427
129	0.80336546	1.4154027	7.5414083	3.427420367	8.773708275	4.38982622	2.791551952	6.02471029	9.366045911	1.757715988	4.63588597	8.89370859
130	1.861532872	0.6567548	0.6552477	0.123896138	7.816668715	3.32388445	7.448487443	2.46487112	0.616353322	5.943789797	5.64550237	7.18177451
131	1.061729959	4.725083	5.7640208	1.50199212	3.499469695	9.77140042	0.444484524	1.0230772	3.082668797	0.80382196	9.17995274	3.89151811
132	7.826104538	8.41589	2.3602133	2.855563812	2.940497194	5.22275118	6.591545995	7.08599426	8.308467033	9.055198667	3.43988953	9.24479939
133	0.338982502	7.0497713	2.206344	5.20022107	6.973386445	0.20706646	1.971270306		2.087571638	1.362260913	9.67502607	2.57004929
133	2.312584393	0.3834089	5.0413366	3.684764143	7.413136008	-	0.950697854		4.518317608	5.628686547	9.63152138	8.74110732
134			2.2212475					-				
-	2.081543501	8.5992968		1.165001464	1.355857881	9.28840639	5.370964759		2.969897628	2.063593943	1.44307387	0.15516669
136	7.031889853	1.0447512	6.8481239	2.728060739	3.734454522	8.2206088	8.538993626		4.435091251	5.213346943	3.99612794	5.70449885
137	1.218691301	6.9166508	5.1305912	4.988541206	7.613462545		9.607116948		6.240953115	1.867174743	2.97239705	1.2782555
138	6.745354945	7.4092549	1.0904888	6.667677508	7.248439269	9.65045893		2.28576631	3.290800454	6.11902538	6.49569075	3.57646797
139	3.022132531	7.2225705	9.4767606	4.581970363	8.397184238	7.87142528	3.97482921	1.74093512	9.060558215	7.560222333	7.56431771	1.84681981
140	2.906056141	0.701321	6.8459653	0.470872536	5.363939954	9.31056199	4.021467553	9.2091693	3.629061852	3.952462214	6.93922042	2.68658335
141	7.263113231	0.3916695	3.5281141	9.907299317	8.769660256	9.106519	5.437446632	8.65828796	1.384545898	3.309138432	6.40582986	0.38772794
142	5.980540211	2.929891	2.7717897	7.598780748	8.818709957	6.92617964	9.537280602	0.78640829	9.514975706	7.779556812	0.32224335	0.48378708
143	3.974977636	9.4206952	4.4738901	9.236100659	9.705167257	5.38745632		3.35047903	5.051634479	1.38862963	4.0788637	6.57103931
144	6.942841374	4.0528087	8.7864172	7.352649751	8.578645431	4.90479924		8.73611173	5.370296636	9.576332201	1.47869434	1.18432611
145	0.055215249	2.9221555	7.2016915	9.754246354	7.992910784	1.13331201	4.115105395	6.18770014	2.009615845	6.376821677	8.11688965	6.80734328
145	7.547218306	1.3110524	5.8018561	5.097103563	2.546016345	2.02423136		6.12908699	7.159446483	7.113419434	9.82055286	7.0028826
140												
147	9.069702512	4.5168106	5.1019769	0.319859779	4.118153676	3.52843919		6.63498957	2.211782512	3.751095757	5.84933078	4.74080572
	7.619357726	5.6361906	7.5424607	3.317743087	3.86590673	6.49E-04		2.25692514	8.550028517	9.890313242	4.98795169	0.04311503
149	2.020071474	1.0376841	2.3757722	8.675963266	6.943457422	0.24023113		3.61454975	2.181581849	7.631758418	7.12224558	6.60267468
150	4.763884917	3.0162831	4.9217058	2.517262976	9.419268402	9.88672388	9.61307567	6.6436551	8.593966964	6.807060985	0.32162979	0.88864937
151	7.969316247	9.0572354	7.7141297	4.36353792	0.92303881	0.42498005	7.660425983	8.29194672	9.576012405	4.477152426	9.10434264	4.02465301
152	0.974987267	5.1529998	7.9467639	8.693150167	4.513654547	8.92912895	2.802242661	4.211459	2.790592836	4.813088205	2.35701673	5.65869012
153	4.742230435	2.8625137	5.4874886	5.613293664	3.509662662	0.28786559	6.623495774	9.65877455	2.134608298	3.123717903	7.63491682	1.70923302
154	6.825283902	5.8226887	5.8359508	2.794847346	5.029420471	6.68093122	5.990474627	9.47679942	7.388354215	3.182540017	7.16432439	2.1422701
155	3.921098551	6.4678739	1.7256964	5.536205295	3.461501981	6.32784858	3.337364527	7.95274749	8.06631859	9.003327714	0.70471433	7.57488671
156	7.088757502	3.7072533	1.3661549	2.772161922	2.426981281	7.16357286	0.693910682	4.8032277	6.925576167	9.540765749	0.67987995	7.51087068
157	7.189350056	0.1375576	8.5683309	8.854196236	3.32977999	7.19337672	7.028723581	6.55735199	4.151730837	6.939837997	0.22422257	2.41398791
158	4.544085818	5.6713401	1.8228371	6.171257541	0.249343876	· · ·	8.723109613	0.27639059	2.120561923	1.572561336	3.1022901	5.65041711
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159	5.134916512			5.202276921	4.557123908	-	8.029860169		0.301047371	0.713289325	9.2741202	0.14998559
160	0.917110197	0.5349138		9.575820646	0.199223128		4.320798398		9.436300413	1.24701729	7.23586746	6.96799212
161	0.198338736	0.8229122	7.9084875	0.47338899	1.080739767		9.923415081	1.71735512	7.709290584	6.430795761	8.86447011	5.52883629
162	0.816826625	0.2642689	6.6013833	2.99965184	5.955373675	-	9.849753196		1.732703224	1.992041541	9.90192248	0.32109311
163	5.165222688	3.6356712	7.9651106	5.378516418	1.303216387		4.877103452	5.72559084	7.372601926	0.394164337	8.16718068	2.24871206
164	9.115719183	5.0255919	3.3236456	1.489960104	0.698451169	2.82965967	3.280860058	2.91881559	8.303451454	5.545758381	9.41108284	3.34923254
165	8.991622428	1.8260043	6.445745	9.624848169	6.862681939	1.75337828	7.304300883	1.62286209	3.262641435	7.998289168	6.45097424	6.24850693
166	7.696336529	8.9652978	6.9185729	0.481223114	2.079042569	7.83945988	2.542814409	5.82609987	1.85528886	5.110244658	0.95810667	9.47669448
167	5.753807329	-		0.297775232	4.305121531		0.6460093	0.72170996	0.495722484	5.78018749	1.16655123	0.17284238
168	9.66180268	1	2.4350877	5.037074176	5.9720967		7.225095975	0.50151499	4.361255831	7.249914139	3.68224301	2.87517126
169	6.976342622	0.739186		6.248326544	5.943140463	3.812763	6.91549127	6.69283899	0.381348956	4.271270069	1.33503462	1.34861401
105	8.974777264	8.4679007	4.273401	9.128009683	7.871628969		1.286151486	6.41714922	5.598524351	2.932971706	6.20493603	5.05586704
171	5.766426066	-	4.7484286	3.772647036	3.691737176		5.055740949		7.19950157	0.146383906	6.52456034	6.29128421
172	9.689831647	6.0403381	8.2562062	9.017693989	0.892375531		8.076671667	5.78796184	0.114964063	0.836729485	2.5426102	1.98881584
173	5.044345647		4.1788309	1.742624206	0.577399259		8.55246238		2.614376125	4.761009015	0.60825309	4.83596049
174	4.72574012	7.7210465	6.4797668	6.756744901	6.944474225	9.63003905	0.43079125	4.54415289	8.604644305	7.801229883	9.55561849	3.61677361
175	9.916913432	5.8585515	1.9332285	8.344294048	6.084197643	6.4901534	0.452436987	5.01714078	1.465223744	4.655501048	2.2413439	9.12084077
176	1.346621773	4.6561718	0.6386411	6.998724551	6.684043515	3.41300765	3.517831461	0.2842164	0.080606391	7.81319792	8.32840763	6.86259879
177	4.971668411	6.1953943	6.9510447	0.439562441	9.847846906	6.17268544	1.738019471	8.00491842	5.457925638		6.66686623	8.9277874
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179 3.253646014 4.3770676 1.7346956 2.4849186 1.93754267 9.40921829 7.068173058 3.19781567 9.503394955 5.632088022 4.00767755 9.2984960 180 9.27002422 5.2244478 8.250325 7.40313327 6.581420459 9.9484064 0.776240462 2.2353751 0.60237746 6.5172035 0.23837255 1.5032401 1.50327753 6.60018729 3.0133967 3.9720534 4.107974018 6.60018729 3.0133967 3.9730534 4.107974018 6.60018729 3.0133967 3.9720534 4.107974018 6.60018729 3.0133967 3.9730545 2.72580465 9.29611555 9.621281 184 8.06106233 5.0494213 3.513222 4.03700746 8.1284409 1.29895243 6.41169781 9.15887565 2.72580465 9.29611555 9.621281 185 5.64001675 5.3135107 7.05222431 1.31184162 6.4788487 6.404051776 4.242276 4.4222716 4.40466511 187 6.466382391 9.3595762 5.125847616 5.347350216 <th></th>													
180 5.200242 5.248470 5.200247 5.2484708 5.200244 5.2484708 5.200244 5.2484708 5.200244 5.2484708 5.200244 5.2484708 5.200244 5.2484708 5.200244 5.2484708 5.200244 5.2484708 5.200244 5.2484708 5.200244 5.2484708 5.200244 5.2484708 5.200244 5.2484708 5.200244 5.2484708 5.200244 5.2484708 5.200244 5.2484708 5.200244 5.2484708 5.200244 5.2484708 5.200244 5.2484708 5.200244 5.2484708 5.200244 2.2492524 6.210781 5.2186707 7.2283708 6.2008471 7.200244 2.2492524 6.210781 6.2008472 7.200247 7.217847 180 2.400179 4.512104 5.300171 7.2017741 5.200771 7.2400477 7.2017741 7.201677 7.2117840 7.2017741 7.201677 7.2217847 7.2017747 7.2017747 7.2017747 7.2017747 7.2017747 7.2017747 7.2017747 7.2017747 7.20177477 7.20177477	178	2.900346258	6.0550316	4.9473191	1.184782126	9.06526319	7.91343542	2.585753531	6.9073843	8.84476862	6.525485763	3.23296021	9.61220029
111 9.5004602 8.500266 9.5230776. 6.470270 6.5002702 6.470270 6.5002702 6.4702701 6.5002702 6.500270 6.4702701 6.5002702 6.500270 6.500270 6.500270 6.500270 6.5002702 6.5002707 6.5002707 6.5002707 6.5002707 6.5002707 6.5002707 6.5002707 6.500270270 6.50027070 6.50	179	3.253646014	4.3770676	1.7346956	2.48499186	1.937542667	9.40921829	7.068173058	3.19781567	9.505394955	5.632058022	4.00760755	9.29649602
111 9.5004602 8.500266 9.5230776. 6.470270 6.5002702 6.470270 6.5002702 6.4702701 6.5002702 6.500270 6.4702701 6.5002702 6.500270 6.500270 6.500270 6.500270 6.5002702 6.5002707 6.5002707 6.5002707 6.5002707 6.5002707 6.5002707 6.5002707 6.500270270 6.50027070 6.50	180	9,270092429	5.2244475	8,2503285	7,493193272	6.581420495	9,99489084	0.77624066	2,23540135	6.57155086	0.238372955	7.69826048	8,72767561
182 4.00000000 1.835772 5.720039 4.0779210 6.0001277 5.1357970 5.720039 4.0779210 6.0001277 5.1357970 5.720039 4.10778101 6.0001277 5.135200 6.0001277 5.135200 6.0001277 5.135200 6.0001277 5.135200 7.200220 4.68013331 1.1185412 7.201200 4.2201200 4.2201200 4.2201200 4.2201200 4.2201200 4.2012000 4.2201200 4.2012000 4.2201200 4.2012000 4.2201200 4.20120000 4.2201200 4.20120000 4.2201200 4.201200000 4.2201200 4.20120000000000000000000000000000000000	-												
181 7.235841849 2.8463156 3.4454706 5.34247205 8.2496072 8.2498024 6.1075076 7.2355846 7.2015041 5.310122 5.201201 185 5.301201 5.311220 5.201201 5.201201 5.10120706 7.2355804 7.20120 4.201201 6.201201 <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>													
184 8.0010239 5.004421 3.53222 8.2078058 8.110878 9.1087582 2.7258046 2.225155 9.42284 185 9.54001577 3.13300 7.00922 4.0157728 0.68813331 1.1181412 4.07359321 1.0888124 0.6003776 4.0480458 186 2.5005187 7.00922 4.0157728 0.68813331 1.1181412 4.0203727 1.11851144 2.000972 7.027841 186 2.5005797 7.112584 5.30020445 2.4292324 0.37764045 5.3511145 5.3161576 3.5165767 3.515777 3.515777 3.5165767 3.5165767 3.515777 3.515777 3.515777 3.515767 3.515767 3.515767 3.515777 3.515777 3.515777 <td></td>													
185 5.94943897 1.279262 1.06944771 4.98931805 8.0481148 0.0192202 1.0219204 1.0219204 1.	_						-						
186 5.460001075 131301 2709222 4.0370728 0.6831333 1313442 4.97939921 13888041 4.04800112 7.00788447 0.6049379 4.432087 187 6.4632379 1.959511 4.5310782 5.23827733 5.0002444 2.4293234 0.37993928 6.233702 2.1566379 5.35515762 2.5365772 7.235845 198 2.5900797 7.132927 0.43927471 9.63232072 1.1372126 8.7758484 5.0175874 5.0357727 1.0353374 1.0357744 5.0357727 1.0352345 0.64082028 5.9382147 5.00021445 5.9385733 1.01420747 3.3375344 3.1111141471 5.0175774 5.0353571 1.1487474 5.0175774 5.0353571 3.1111141471 3.0175744 5.0353571 3.1111141471 3.0175774 3.11111414114 5.1175774 5.035357 5.0353771 5.53350161 5.0350771 5.53350161 5.0350771 5.53350161 5.0350771 5.53350161 5.0175077 5.53350161 5.0175077 5.53350161 5.0175067 5.233501722 5.23350721 </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>-</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>							-						
197 6.466382991 1.9956714 0.9381781 4.90961127 2.39335865 5.7951045 6.513359321 2.10155197 3.5065772 3.10567772 3.1056772 3.1056772 3.1056772 3.1056772 3.1056772 3.1056772 3.1056772 3.1056772 3.1056772 3.1056772 3.1057741 3.005772 3.005772 3.005772 3.005772 3.0057839 0.40270394 5.9017343 3.0033391 1.0154117 3.0042833 3.10572447 3.0057839 0.40270344 3.0057833 3.0057839 0.40270344 3.00578333 3.0031402 136 2.0057836 8.001933 3.007274043 3.00727404 3.00578344 3.00727414 3.00578333 3.0011444 3.007276333 3.0011444 <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td>-</td><td></td><td></td><td></td><td></td><td></td><td></td></td<>							-						
188 7.90680991 3.2799511 4.932778 5.21607092 1.924239 189 2.099947 4.52189 6.857971 J.12827413 6.9527912 1.92721416 5.72687714 9.91091242 190 3.49904923 J.2200771 J.12827712 J.12827712 J.12827712 J.12827712 J.12827712 J.12827712 J.1272146 S.47286714 S.972571 J.1278271 J.1292717 J.1292712 J.1272144 S.47286714 S.972572 J.1278274 J.12782744 J.12782744 J.12782744 J.12782744 J.12782744 J.12782744 J.12782744 J.12782744 J.127827444 J.12787744 J.127877444777							-						
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194 5.575515161 6.37258.4 9.6710953 9.89309311 1.185711966 1.2690263 2.19017369 7.220777225 5.8830196 1.09342012 195 0.76774044 2.2695126 4.6737911 9.60076073 3.7272225 7.02077225 5.8311949 1.99453836 6.74623176 3.72701615 2.49991539 4.6737911 9.62264176 3.72701615 2.49092137 4.17555727 4.4015441 2.66631935 7.41233431 6.27467136 4.7279352 196 6.226710144 6.610760 0.046631 7.7102669 9.73574494 5.7169153 6.0771254 7.8601156 5.0978157 5.8980153 4.47834472 2.3601269 206 9.5006650 5.2768151 6.70126621 7.53644864 2.73701615 5.0980153 4.47834472 2.3680247 201 9.100665001 6.0420490 7.20172852 5.3121523 6.8120677 7.53027474 5.071245 5.8980153 4.47834472 5.3014457 5.0712457 5.3012475 5.3012475 5.3012475 5.3012474 5.3014454	192	7.399385099	3.9772544	8.2992402	6.737430255	9.46280732	2.30772635	4.046820298	9.55845528	7.992011813	7.720911974	8.71810497	3.39573631
195 0.797746491 2.2983281 8.2991971 6.60756704 3.72724225 7.2075804 9.1111940 1.48813444 0.09065868 2.2869569551 3.28619606 6.3011404 196 2.19791054 4.5777910 0.772615 5.04982818 1.10441067 5.23556774 4.1055447 2.66119522 1.920051664 0.9279513 4.7273335 196 3.224701141 6.6110766 0.0494681 7.75102669 7.7514494 5.7189513 5.97890155 5.478691374 2.36405313 200 9.00666902 9.788556 5.7787135 4.077165021 1.3486647 2.774224255 5.71215 5.9890153 4.4789447 2.56116937 3.880547 201 6.5925895 7.11364012 7.7624628 2.7825438 8.312525 3.97443438 8.3052526 6.05116977 3.880547 203 7.672568154 0.78074444 5.51464977 7.8754808 8.125257 3.9748438 8.305226 6.31916997 3.8795765 203 6.675569741 0.78077967 7.6754882 8.	193	1.022124423	9.9191998	8.3161591	4.70772057	2.77225937	1.00440375	0.44789194	3.95090632	7.909652715	3.933835371	1.21489773	4.91726526
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209 4.926283667 5.4289761 1.9305445 3.807390038 1.247948976 5.7699881 8.070981887 2.57164919 1.587439475 6.744682601 9.53846496 9.92291892 210 6.542563261 7.431248 5.4904955 5.328131743 9.661391071 2.60210469 4.107752018 6.6660528 5.398957576 5.959731325 3.73412218 6.57692200 211 6.404419464 3.6227388 1.5985010 1.054607067 1.65017752018 4.66602285 5.398957576 5.599731325 3.7342128 5.77602501 212 5.226203523 1.838472 7.516853816 3.22349296 6.0070534 7.415157462 7.3610317 3.251758387 5.329923819 1.10375325 5.5610493 214 7.092746422 7.11749 2.76630713 3.42676842 5.05936761 3.3817663 3.8584267 215 6.455488534 1.771149 2.76633713 3.49675437 5.363650562 5.513344437 6.510668 2.492177 7.41621262 2.4391705 2.1250444 1.1262627 1.4256227 </td <td>207</td> <td>4.352924081</td> <td>0.562062</td> <td>5.210397</td> <td>4.224448687</td> <td>8.467921977</td> <td>3.93786234</td> <td>8.794726687</td> <td>4.41453941</td> <td>9.933298854</td> <td>8.042405975</td> <td>8.34763054</td> <td>5.84646373</td>	207	4.352924081	0.562062	5.210397	4.224448687	8.467921977	3.93786234	8.794726687	4.41453941	9.933298854	8.042405975	8.34763054	5.84646373
210 6.542563261 7.431348 5.4490495 5.328131743 9.681391071 2.60210469 4.107752018 4.66602528 5.398957576 5.963731325 3.72412218 6.57692300 211 6.404414944 3.6227338 8.1558601 7.516653316 3.22489296 6.00077614 9.57510208 3.16343886 8.594571271 2.70200273 3.3782248 212 5.22603523 1.3835472 7.636807 7.516853816 3.22438255 5.6101994 2.5059367631 3.38176053 9.86518311 214 7.092746422 7.11749 2.7652744 9.397913364 0.509860173 1.43263306 0.403774752 0.54333555 0.378866422 1.38569978 9.3887575 S.3584267 215 6.455848534 1.731405 4.3028576 8.519301 5.10414162 2.74533718 4.71361766 6.586617317 3.480594158 7.61412262 2.43917055 2.12504344 217 7.07229917 1.633825 0.943855 9.53300683 9.441777248 4.77387477 5.365605052 0.51344437 5.310064	208	6.015626714	6.8045856	6.0217574	0.074056304	3.07554561	1.14624722	2.85974704	3.8653989	9.86598579	7.967422753	3.16519716	2.91788397
211 6.40419464 3.6227938 8.1598601 0.154602902 6.149070467 4.65168075 1.600177619 9.57510208 3.16343886 8.594571271 2.70200273 3.3782480 212 5.22620323 1.8385472 7.636807 7.516853816 3.223489296 6.0070534 7.45157542 7.36130137 3.251758387 5.329923819 1.1037325 5.5610493 213 0.277101696 3.742186 5.3215422 3.0782048 9.2325756 8.718137 8.06733051 5.5610492 1.38569798 9.38875755 8.3584267 214 7.092746422 7.11749 2.7662734 9.397913364 0.509860173 1.43263308 0.43774752 0.54435355 0.378866422 1.385699798 9.38875755 8.3584267 216 6.455848534 1.7313405 4.5084554 1.60931864 6.57367203 7.6902647 7.374235251 0.64548737 7.8166388 4.1236232 217 7.07259517 1.6338256 9.53036838 6.417702187 9.17578944 6.537367203 7.59043251 0.766419164 4.8870719 4.1236232 220 8.6207255 2.7532341 <td>209</td> <td>4.926283667</td> <td>5.4289761</td> <td>1.9305445</td> <td>3.807390038</td> <td>1.247948976</td> <td>5.76098881</td> <td>8.070981887</td> <td>2.57164919</td> <td>1.587439475</td> <td>6.744682601</td> <td>9.53846496</td> <td>9.92291898</td>	209	4.926283667	5.4289761	1.9305445	3.807390038	1.247948976	5.76098881	8.070981887	2.57164919	1.587439475	6.744682601	9.53846496	9.92291898
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227 1.097662795 7.252926 2.4541957 3.066278274 9.265165793 4.84398625 9.723849486 0.45151174 4.957793169 8.025788237 3.3198115 7.40984563 228 8.936090582 2.7420197 6.4875222 2.465110793 2.135152381 2.59706252 8.597635588 7.67190787 8.20807304 9.336050694 4.26449209 6.8924013 229 8.000425086 6.3531808 6.826786 1.292734083 6.898250518 0.15864377 2.420594219 6.06010697 1.930085803 0.586101776 9.32905272 6.62488249 230 1.558855486 8.9694364 7.0510756 2.927266205 7.086316851 7.96993857 2.688962881 9.71258274 3.296917965 1.914331491 3.67641128 8.8088224 231 3.360395423 2.1421291 8.0040322 8.421825422 8.482390147 5.67364157 4.038195682 7.8459584 1.383680669 9.029774709 7.44232387 6.4580113 232 5.244438367 6.9408677 1.5067895 2.777882443 <t< td=""><td>225</td><td>3.810866082</td><td>0.0597634</td><td>2.5640239</td><td>5.128693161</td><td>7.345742187</td><td>6.68307501</td><td>9.827309743</td><td>3.43430271</td><td>3.937547417</td><td>0.924704236</td><td>9.10571336</td><td>9.32876435</td></t<>	225	3.810866082	0.0597634	2.5640239	5.128693161	7.345742187	6.68307501	9.827309743	3.43430271	3.937547417	0.924704236	9.10571336	9.32876435
227 1.097662795 7.2529926 2.4541957 3.066278274 9.265165793 4.84398625 9.723849486 0.45151174 4.957793169 8.025788237 3.3198115 7.40984563 228 8.936090582 2.7420197 6.4875222 2.465110793 2.135152381 2.59706252 8.597635588 7.67190787 8.20807304 9.336050694 4.26449209 6.8924013 229 8.000425086 6.3531808 6.826786 1.292734083 6.898250518 0.15864377 2.420594219 6.06010697 1.930085803 0.586101776 9.32905272 6.62488249 230 1.558855486 8.9694364 7.0510756 2.927266205 7.086316851 7.96993857 2.688962881 9.71258274 3.296917965 1.914331491 3.67641128 8.8088224 231 3.36035423 2.1421291 8.0040322 8.421825422 8.482390147 5.67364157 4.038195682 7.8459954 1.383680669 9.029774709 7.44232387 6.4580113 232 5.244438367 6.9408677 1.5067895 2.777882443 <t< td=""><td>226</td><td>8.703432705</td><td>5.3521228</td><td>0.4274845</td><td>1.738084478</td><td>3.013553861</td><td>2.4104786</td><td>8.246740362</td><td>7.00995636</td><td>1.323499776</td><td>3.668773547</td><td>3.78540996</td><td>7.27541229</td></t<>	226	8.703432705	5.3521228	0.4274845	1.738084478	3.013553861	2.4104786	8.246740362	7.00995636	1.323499776	3.668773547	3.78540996	7.27541229
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	237	1.5393959	2.2967856	1.7256994	5.840880014	6.068766686	5.28644549	9.442503904	2.97613455	3.563953503	7.741358393	2.46301953	4.3666926

28 50085880 1102102 1.077020 9.	238	5.693483486	2.1161984	4.1262374	3.04739628	0 167505794	7 92107692	5 666604262	7 72499617	5.386667818	8.490023027	1.14188274	6.41778546
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260 25004622 C.000016 4.971181 1.19470218 2.020029 2.020029 2.020029 2.020029 2.020029 2.020029 2.020029 2.020029 2.020029 2.020029 2.020029 2.020029 2.020029 2.020029 2.020029 2.020029 2.020020 2.0200207 2.020027 2.020027 2.020027 2.020027 2.020027 2.020027 2.020027 2.020027 2.020027 2.020027 2.020027 2.02002	244	1.346621773	4.6561718	0.6386411	6.998724551	6.684043515	3.41300765	3.517831461	0.2842164	0.080606391	7.81319792	8.32840763	6.86259879
20 2.33640014 4.3770070 1.3784007 5.0034805 5.00	245	4.971668411	6.1953943	6.9510447	0.439562441	9.847846906	6.17268544	1.738019471	8.00491842	5.457925638	6.166708692	6.66686623	8.9277874
jake szymosyta Szakarya Example Szymosyta Szzekarya Szymosyta 280 Szzekarya	246	2.900346258	6.0550316	4.9473191	1.184782126	9.06526319	7.91343542	2.585753531	6.9073843	8.84476862	6.525485763	3.23296021	9.61220029
200 32,200,220 2,204,721 5,200,800 4,201,725 7,802,800 5,712,7205 7,802,800 7,7751,700 7,7751,700 7,7751,700 7,7751,700 7,7751,700 7,7751,700 7,7775,777 7,7777,777 7,7777,777 7,7777,777 7,77777,777 7,77777,777 7,777777 7,77777 7,777777 7,777777 7,777777 7,7777777 7,777777 7,777777 7,777777 7,777777 7,77777777	247	3.253646014	4.3770676	1.7346956	2,48499186	1.937542667	9.40921829	7.068173058	3.19781567	9.505394955	5.632058022	4.00760755	9.29649602
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227 2.49919497 4.637921 5.12274713 5.6409214 2.72964474 5.9315019 3.11972101 6.72964741 5.9416971 1.72964482 298 3.99274757 5.4312924 4.59952201 1.8133348 1.44372127 6.77849440 5.0610370 7.771897 5.9911342 6.3131040 5.0610370 7.771897 5.9911342 6.3131040 5.0610370 7.771897 5.9911342 6.3131041 5.0610474 6.3290671 5.7911145 5.0711447 5.20204143 5.07114474 5.722044751 5.79114474 5.72204751 5.79114474 5.79114474 5.79114474 5.79114474 5.79114474 5.7914474 5.7914474 5.7914474 5.79144741 5.79144741 5.79144741 5.79144741 5.79144741 5.79144741 5.79144741 5.79144741 5.79144741 5.79144741 5.79144741 5.79144741 5.79144741 5.79144741 5.79144741 5.791474741 5.791474741 5.791474741 5.791474741 5.791474741 5.791474741 5.791474741 5.791474741 5.791474741 5.791474741 5.791474741	255	6.466382939	1.9956714	0.9388178	4.909611876	2.359353865	5.79361045	6.513359593	8.61999614	2.496809182	7.039119144	9.20089922	7.67277412
3.49994820 3.2999782 1.299977 7.112382 3.9912147 2.0912776 7.112382 5.991214	256	7.506680493	3.7396311	4.9510788	5.238277035	5.000026445	2.42932534	0.376991978	6.0233705	2.151685199	5.356157621	9.51606708	7.16242368
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229 8.1952/14757 4.59952201 1.8135348 1.4872217 8.07389445 5.0217469 5.0171474 5.012069 5.0171469 5.0171474 5.0171474 5.012069 5.0171469 5.0171474 5.0171474 5.012069 5.0101149 5.01114949 5.0101149 5.0101149 5.0101149 5.011149 5.011149 5.011149 5.011149 5.0111149 5.0111149 5.0111149 5.0111149 5.0111149 5.0111149 5.0111149 5.0111149 5.0111149 5.011111149 5.01111149 5.011111149 5.01111111149 5.0111111111111111111111111111111111111	258	3,499048923	3,2300979	1,7896772	0.169267447	2,49594662	6,18091697	3,735125595	2,91821147	2,601417756	6.874368103	9.0587972	7,11788884
95 5.986540211 2.272893 2.272893 7.9785704 2.8382704 3.3883704 3.3883704 3.3883704 3.3883704 3.3883704 3.3883707 3.3883777 3.3883707 3.3893707 3.3383707 3.3893707 3.389													
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2000714/41 1.0378841 2.127722 6.67963266 6.9445742 0.2402313 6.6805318 3.6148475 1.61378481 7.1224555 6.60207482 268 4.73894173 0.103276 7.51728275 9.1212757 6.9125647 6.932158 9.3139767 6.5395685 0.2312677 6.6385518 6.9329647 6.2312677 6.53884917 0.1034264 4.02465011 270 6.749220453 5.6325667 5.03256477 5.93247677 1.23460228 4.13271700 7.6494962 1.7983302 271 6.45223802 5.6325687 5.03246677 1.0256441 5.09047467 9.4767942 7.88354215 5.0332774 0.70471443 7.3448671 274 7.08737503 1.66149 1.77116122 2.4269121 1.6357485 6.5337167 6.53576167 5.4040521 5.71486774 0.70471443 7.3448671 275 7.18932045 5.6137474 1.7257614 0.42943876 1.537688 0.5317194 4.5371476 7.71487147 7.3484774 0.7787777 7.31487147 0.72824778	265	9.069702512	4.5168106	5.1019769	0.319859779	4.118153676	3.52843919	0.828337978	6.63498957	2.211782512	3.751095757	5.84933078	4.74080572
188 4.763384917 3.016231 4.5210587 5.9370297 6.463501 8.93986984 6.80706983 6.2120377 6.88705912 8.0370697 6.83705912 8.0315017 6.715057 8.0315017 6.715057 8.0315017 6.5150595 7.6463501 8.2114692 8.21146923 8.21146923 8.211471763 7.64463511 8.211471763 7.64463511 8.211471763 7.64463511 8.211471763 7.64463511 8.211471763 7.6445314 2.121471763 7.64454314 2.121471763 7.6455314 2.121471763 7.6455314 2.121471763 2.7464431 2.12171763 2.7464431 2.12171763 2.7464531 2.57513177 2.7514744 2.4472701 277 1.42526752 3.777116122 2.4269121 1.5377431 2.7216321 2.575132361 5.57312916 4.53721391 4.575212916 4.537212916 4.57521391 2.125501291 5.5751291 5.57512916 5.5644711 5.5644711 5.5878212 278 0.51656512 6.4464239 5.20276911 4.55753219 6.24310939 1.12470711 7.7123832	266	7.619357726	5.6361906	7.5424607	3.317743087	3.86590673	6.49E-04	0.511300811	2.25692514	8.550028517	9.890313242	4.98795169	0.04311503
99 7.9911627 9.072264 7.71127 4.395372 0.9230881 0.4249005 7.96042588 2.29726 9.17904264 4.211457 7.9092386 4.81108825 2.577107 5.5690617 271 4.74220435 2.8625137 5.4874886 5.0129364 5.0046262 2.2776455 6.22495774 9.6697455 2.14660298 3.112241070 7.6434162 1.70923302 277 6.85238906 5.8226887 5.8359056 2.77844786 5.30724458 3.37784277 7.9857576167 9.54076543 7.16432439 2.1422701 278 7.10395516 6.477793 1.72576167 9.54076749 5.7501678 9.5407674 0.67877997 7.57170177 0.25776167 9.54076749 0.67877997 7.537772 0.25770876 6.3293774 0.7787793776 0.57375199 6.1371278 0.7327979 7.1337877 0.25776167 9.5407674 0.2298215 2.2079214 4.329789918 6.4470777 0.7223825 2.214011377 0.7223825 2.214011378 0.34976818 6.47470777 0.7223825 2.2491113538	267	2.020071474	1.0376841	2.3757722	8.675963266	6.943457422	0.24023113	8.680526173	3.61454975	2.181581849	7.631758418	7.12224558	6.60267468
1270 0.974907207 5.152998 7.94773 6.8723045 2.8072167 5.6589012 1271 4.74220455 2.805735 5.437868 5.1329646 3.05966260 2.0784575 5.1439883 1.217797 7.6432439 2.1422701 272 6.82528302 5.4226887 5.33805202 5.4266887 5.33805202 3.46160301 6.3076483 6.33776427 7.957744 7.0683125 5.990474627 9.4777944 0.6661165 9.00327714 0.7047743 7.5484671 274 7.08577001 7.07758 5.653309 8.254196226 0.3375767 7.03872581 6.075300627 0.67897897 7.50169 9.40476740 0.67897897 7.501979 5.5027089 7.03872581 6.57350161 9.4731206 0.53837879 0.2242257 2.4139711 5.23882629 276 0.51375576 5.50270821 5.7352644 3.3079892 0.30147371 0.7328328 7.3021306 0.1375578 5.53850421 4.33703989 0.30147371 0.733828 7.301478 0.3137557 5.5385144113933533775 5.5	268	4.763884917	3.0162831	4.9217058	2.517262976	9.419268402	9.88672388	9.61307567	6.6436551	8.593966964	6.807060985	0.32162979	0.88864937
1270 0.974987267 5.129398 7.9467267 5.63129364 3.05066262 2.02742661 4.11308283 2.33701672 5.63809012 277 4.74220435 2.682538700 5.223687 5.8395082 2.78447746 5.03906262 2.0786575 5.1490883 3.18234001 7.16432438 2.1422701 273 3.921098531 6.4076729 1.725644 5.3600525 3.46101361 6.32704850 3.33704227 7.5527444 8.06611359 9.00327714 0.70471433 7.5488671 274 7.08577062 3.777578 5.64803199 3.835149226 3.32979492 1.03277145 0.57807566 5.0501755 5.51807663 276 5.45405318 5.71317566 5.050272971 1.537125606 0.3297999 1.1032613 0.72755135 1.0220571 5.538756 5.1238958 5.4451009 9.43827914 0.712289235 3.244176 1.7129703 5.444171 5.23886271 276 0.51710179 5.344444239 5.022278911 5.37551444 3.30764257 4.327026634 6.3075754 5.	269	7.969316247	9.0572354	7.7141297	4.36353792	0.92303881	0.42498005	7.660425983	8.29194672	9.576012405	4.477152426	9.10434264	4.02465301
17. 4.74220403 2.8625137 5.4478696 3.50965062 0.2376559 6.6248577 9.6537952 2.1480828 3.123717981 7.6491662 7.093302 272 6.6238300 5.823600 5.358005 5.358005 2.7484786 5.3620525 3.46150191 6.32764858 3.33764527 7.95274749 6.06611859 9.00327714 0.70471433 7.5488671 274 7.08875700 3.707233 1.366149 2.777161922 2.426981281 7.1357776 0.63971062 4.593267 9.5387907 0.2327771 6.32575199 4.15170367 6.9388790 0.232277 2.1387799 7.13577 0.377710 7.01232825 0.41711 0.172256136 0.47887957 0.5377110 0.17025761 0.547111 5.7235235 0.41401771 0.71228325 0.714101771 0.71232825 0.714101771 0.71232825 0.7141011 5.23857161 0.53751673 0.537761 0.5387113 0.340711 5.2382356 0.4241011 5.23875161 1.0705716 0.5387111 0.7375178 0.5467111 5.53755771 0.55577677 </td <td></td>													
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282 9.115719183 5.0255919 3.3236456 1.489960104 0.698451169 2.8295967 3.280860058 2.91881559 8.303451454 5.545758381 9.41108284 3.34923254 284 7.696335529 8.652276 6.185729 0.641272114 2.799289166 6.45097424 6.24550693 284 7.696335529 8.652796 0.297775232 4.305121531 4.71043944 0.6460093 0.7217096 0.49572484 5.78018749 1.16655123 0.17284238 285 5.753807329 2.882894 5.987367 0.29777523 4.305121531 4.71043944 0.6460093 0.7217096 0.49572484 5.78018749 1.16655123 0.17284238 286 9.66180268 2.0587332 2.435004104 3.8174556 6.31504462 3.31146565 4.27127006 6.20493603 5.05586704 287 6.59634622 1.04933818 3.62026 9.01793998 9.82357531 1.1021716 8.076716621 7.19950157 0.146383906 6.52465044 5.9124441 291 5.22603523 1.838	280	0.816826625	0.2642689	6.6013833	2.99965184	5.955373675	4.51246888	9.849753196	9.04832239	1.732703224	1.992041541	9.90192248	0.32109311
283 8.991622428 1.8260043 6.485745 9.624848169 6.86268139 1.75337628 7.304300883 1.62286209 3.262641435 7.998289168 6.45097424 6.248506933 284 7.696336529 8.965277 6.0185729 0.481223114 2.07942569 7.83945988 2.543814409 5.8260997 1.655728886 5.110244658 0.95810667 9.76969448 285 5.753807329 2.4350877 5.037074176 5.9720967 1.65749258 7.225095975 0.50151499 4.36125881 7.249914139 3.68224301 2.87517126 287 6.976342622 0.7739168 6.309028 5.48325644 5.943140463 3.812763 6.51545012 7.69503397170 0.14383906 6.20439603 5.05586704 289 5.76642006 9.773542 4.748428 3.777647036 3.6917317 3.733729 5.05574049 7.916001 7.1950157 0.14633906 5.2446101 1.9881584 290 9.689831647 6.4003381 3.22248295 6.007634 7.415157462 7.3613013 3.251758837	281	5.165222688	3.6356712	7.9651106	5.378516418	1.303216387	6.66350682	4.877103452	5.72559084	7.372601926	0.394164337	8.16718068	2.24871206
284 7.696336529 8.9652978 6.9185729 0.481223114 2.079042569 7.83345988 2.542814409 5.82609987 1.85528886 5.110244658 0.95810667 9.47669448 285 5.73807329 2.8825994 5.9873767 0.297775222 4.30512131 4.71043944 0.6460093 0.7217099 0.49572448 5.78018749 1.16655129 0.17284238 286 9.66180268 2.087332 2.4825944 5.943140463 3.812763 6.91549127 6.69283899 0.381348956 4.271270069 1.33503462 1.34861401 288 8.974777246 8.4679007 4.27240103 6.91737176 3.7935729 5.055740049 9.79160604 9.7915604 6.9138306 6.5245043 6.2912421 290 9.689831647 6.0403381 8.2562062 9.017633989 0.89237551 0.11052176 8.076671667 5.78796184 0.114964063 0.836729485 2.5426102 1.9881584 291 5.226029321 1.8385472 7.686807 7.516853816 3.202923705 5.51349996 5.663567331 <td>282</td> <td>9.115719183</td> <td>5.0255919</td> <td>3.3236456</td> <td>1.489960104</td> <td>0.698451169</td> <td>2.82965967</td> <td>3.280860058</td> <td>2.91881559</td> <td>8.303451454</td> <td>5.545758381</td> <td>9.41108284</td> <td>3.34923254</td>	282	9.115719183	5.0255919	3.3236456	1.489960104	0.698451169	2.82965967	3.280860058	2.91881559	8.303451454	5.545758381	9.41108284	3.34923254
285 5.753807329 2.882894 5.9873767 0.297775232 4.305121531 4.71043944 0.6460093 0.72170996 0.495722484 5.78018749 1.16655123 0.17284238 286 9.66180268 2.0587332 2.4350877 5.037074176 5.9720671 165749258 7.225095975 0.50151499 4.81255831 7.249914139 3.68224301 2.87517126 287 6.976342622 0.739186 6.3309028 6.248326544 5.943140463 3.812763 6.91549127 6.5928389 0.831348956 4.271270069 1.33503462 1.34861401 288 5.766426066 9.7793542 4.744428 3.772647036 3.691737176 3.7935729 5.055740949 7.97160021 7.1950157 0.44633306 6.2456014 2.932971706 6.24956044 2.9128412 291 5.226203523 1.838472 7.16633816 3.22489296 6.0705347 4.71515742 7.8611043 0.81672948 2.5426102 1.9881584 292 0.277101696 3.7421186 5.3215422 3.07852048 9.922356756	283	8.991622428	1.8260043	6.445745	9.624848169	6.862681939	1.75337828	7.304300883	1.62286209	3.262641435	7.998289168	6.45097424	6.24850693
286 9.66180268 2.0587332 2.4330877 5.037074176 5.9720967 1.65749258 7.225095975 0.50151499 4.361255831 7.249914139 3.68224301 2.87517126 287 6.576342662 0.739186 6.3309028 6.248326544 5.94140463 3.812763 6.691549127 6.69283899 0.381348956 4.27127069 1.33503462 1.34861401 289 5.766426066 9.7793542 4.7484286 3.772647036 3.691737176 3.7935729 5.055740949 7.97166021 7.19950157 0.146383906 6.52456024 1.98881584 291 5.22603523 1.838547 7.66807 7.51685316 3.223482926 6.0070534 7.415157462 7.36130137 3.25175837 5.329923811 1.1037325 5.5610499 293 0.0277101696 3.7421186 5.3215422 3.07852048 9.5782557 9.75158545 1.80851026 3.561459642 5.35346733 3.38176053 9.3887795 8.35842674 294 6.455488534 1.731340 4.3028556 8.6742218348 9.5762557	284	7.696336529	8.9652978	6.9185729	0.481223114	2.079042569	7.83945988	2.542814409	5.82609987	1.85528886	5.110244658	0.95810667	9.47669448
286 9.66180268 2.0587332 2.4350877 5.037074176 5.9720967 1.65749258 7.225095975 0.50151499 4.361255831 7.249914139 3.68224301 2.87517126 287 6.576342662 0.739186 6.3309028 6.24832644 5.94140463 3.812763 6.691549127 6.69283839 0.381348956 4.27127069 1.33503462 1.34861401 289 5.766426066 9.7793542 4.7484286 3.772647036 3.691737176 3.7935729 5.055740949 7.97166021 7.19950157 0.146833906 6.52456024 1.98881584 291 5.226003523 1.838547 7.66807 7.516853816 3.22482926 6.0070534 7.415157462 7.36130137 3.25178387 5.329923811 1.10373325 5.5610493 293 7.092746422 7.11749 2.766274 9.397913364 0.509860173 1.43263308 0.6373709 6.6365551 5.61495642 5.31344437 6.91068 2.9267217 294 6.455488534 1.731405 3.302755 8.74228196 8.029654888	285	5.753807329	2.8828994	5.9873767	0.297775232	4.305121531	4.71043944	0.6460093	0.72170996	0.495722484	5.78018749	1.16655123	0.17284238
287 6.976342622 0.739186 6.3309028 6.248326544 5.943140463 3.812763 6.91549127 6.69283899 0.381348956 4.271270069 1.33503462 1.34861401 288 8.974777264 8.4679007 4.273401 9.128009683 7.871628969 3.8385721 1.226151486 6.41714922 5.59524351 2.932971706 6.20493603 6.52456034 6.29128421 290 9.689831647 6.0403381 8.256202 9.017693389 0.83275531 0.11052176 8.076671667 5.78796144 0.114964063 0.836729485 2.542101 1.9881584 291 5.226203523 1.8385472 7.66807 7.516553816 3.221489296 6.0070534 7.415157462 7.36130137 3.251758387 5.329923819 1.10373225 5.56010493 293 7.092746422 7.11749 2.7662724 9.39791336 0.099860173 1.43263305 0.37866422 1.38176053 8.3886724 294 6.455488534 1.713405 4.3028756 8.47228196 6.00265348 9.7714584555 1.80851056 </td <td>286</td> <td>9,66180268</td> <td>2.0587332</td> <td>2,4350877</td> <td></td> <td>5,9720967</td> <td>1.65749258</td> <td>7,225095975</td> <td>0.50151499</td> <td></td> <td>7,249914139</td> <td>3.68224301</td> <td></td>	286	9,66180268	2.0587332	2,4350877		5,9720967	1.65749258	7,225095975	0.50151499		7,249914139	3.68224301	
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Figure 3: COVID-19 Dataset (Positive Cases)

3.2 Adaptive Neuro Fuzzy Inference System (ANFIS)

ANFIS is a Fuzzy Inference System (FIS) implemented in the framework of adaptive networks. It integrates both Neural Networks (NN) And Fuzzy Logic (FL) principles into a single framework with learning capability to approximate non-linear functions and works as a universal estimator. It is based on the Takagi–Sugeno FIS [15]. The ANFIS architecture is made up of six layers, the layers are described below:

Input Layer: the symptoms for diagnosing COVID-19 are the inputs used in this layer. These symptoms include: fever, dry cough, tiredness, aches and pains, sore throat, diarrhoea, conjunctivitis, headache, loss of taste or smell, a rash on skin or discolouration of fingers or toes, difficulty breathing or shortness of breath and chest pain or pressure. The input layer is represented mathematically as shown in equation 1:

$$\mathbf{O}_{\mathbf{i}}^{1} = \mathbf{x}_{\mathbf{i}} \tag{1}$$

Where;

 O_i^1 is the ith neuron output from the input layer x is value for each parameters

Membership function Layer: it connects the symptoms from the input layer to a fuzzy set. In this layer each symptom is mapped using the Gaussian membership function to a membership set. The Gaussian membership function is shown in equation 2:

$$\mu(\mathbf{x}) = \exp\left(-\frac{(c_i - x)^2}{2a_i^2}\right)$$
(2)

Where;

 $c_i \mbox{ is the centre of the } i^{th} \mbox{ fuzzy set }$

 a_i is the width of the i^{th} fuzzy set

x is the value for each node input

 $\mu(x)$ is the membership function of x.

Rule Layer: in this layer the fuzzified symptom values are combined using Takagi-Sugeno inference rule to generate an outcome for each case. Takagi-Sugeno is a fuzzy inference technique that develops a systematic approach to generate fuzzy rules from a given input – output data set. Takagi-Sugeno has fuzzy inputs and a crisp output. Takagi-Sugeno uses weighted average to compute the crisp output. It is computationally efficient and suitable to work with optimization and adaptive techniques, so it is very adequate for control problems, mainly for dynamic nonlinear systems [17]. It can be represented mathematically as shown in equation 3:

$$0_i^3 = \mu(x) * \mu(y)$$
 (3)

Where;

 O_i^3 is the ith neuron output from the rule layer x and y are the inputs to node i $\mu(x)$ and $\mu(y)$ is the membership function of x and y respectively.

Normalization Layer: each neuron in this layer links to exactly one neuron in the rule layer and it computes the firing strength of each rule. It can be denoted mathematically as shown in equation 4:

$$0_i^4 = \frac{0_i^3}{0_1^3 + 0_2^3 + \dots + 0_n^3}$$
(4)

Where;

 O_i^4 is the ith neuron output for normalization layer O_i^3 is the ith neuron output from the rule layer n is the total number of neurons in normalization layer.

Defuzzification Layer: consists of a single neuron to which all the neurons from the normalization layer are linked. The defuzzification layer output is determined by multiplying the firing strength of a rule by its subsequent parameters. The defuzzification method used in this layer is wtaver. It can be represented mathematically as shown in equation 5:

$$0_i^5 = 0_i^4(p_i x + q_i y + r)$$
 (5)

Where;

 O_i^5 is the ith neuron output for defuzzification layer O_i^4 is the ith neuron output for normalization layer x and y are the inputs to node i p_i and q_i are the consequent parameters r is the bias

Output Layer: the neurons in this layer determined the total output of the ANFIS. The input into this layer is received from the defuzzification layer and it creates its output by adding the inputs from the defuzzification layer. It can be represented mathematically as shown in equation 6:

$$O_i^6 = \sum_i^n O_i^5 \tag{6}$$

Where;

 O_i^6 is the total output of the ANFIS

 O_i^5 is the ith neuron output from defuzzification layer.

Matrix Laboratory (MATLAB) version 7.5.0.342 (R2007b) was used to implement the ANFIS model on Windows 10 Operating System (OS), running on Intel Celeron.

4.0 Experiment, Result and Discussion

The dataset used for the experiment was divided into two independent datasets with 67% (400) of the dataset was used for training of the ANFIS model and 33% (200) of dataset for testing of the model. The 400 dataset used for training of the ANFIS model consists of 200 dataset from the negative cases and another 200 dataset from the positive cases, the 200 dataset used for testing of the ANFIS model consists of 100 dataset from the negative cases and another 100 dataset from the positive cases. The structure of the loaded dataset for training and testing is shown in Figure 4 and Figure 5 respectively:

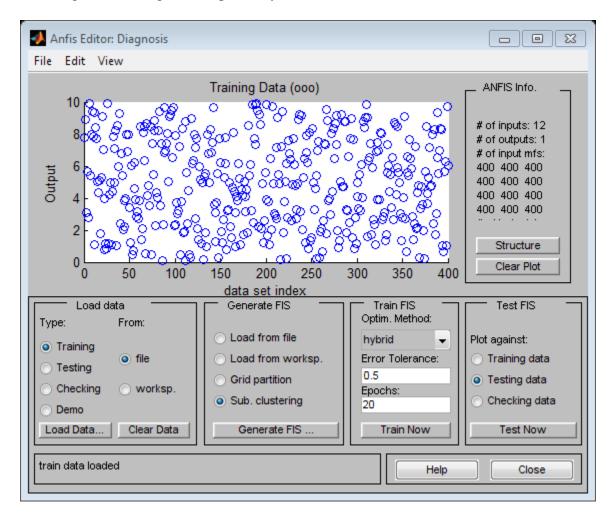


Figure 4: Training Data Structure

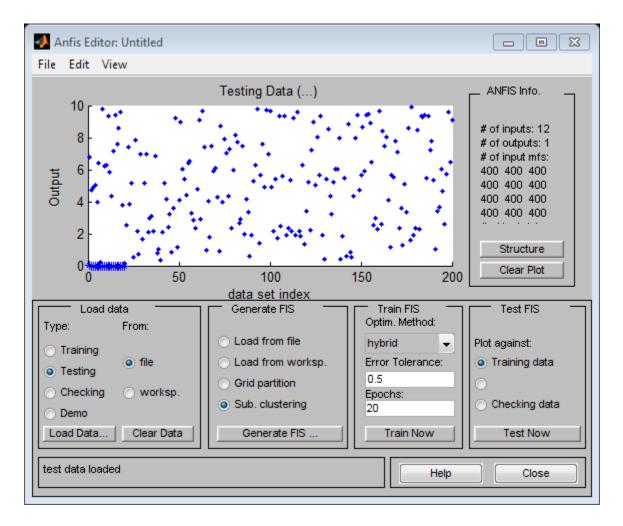
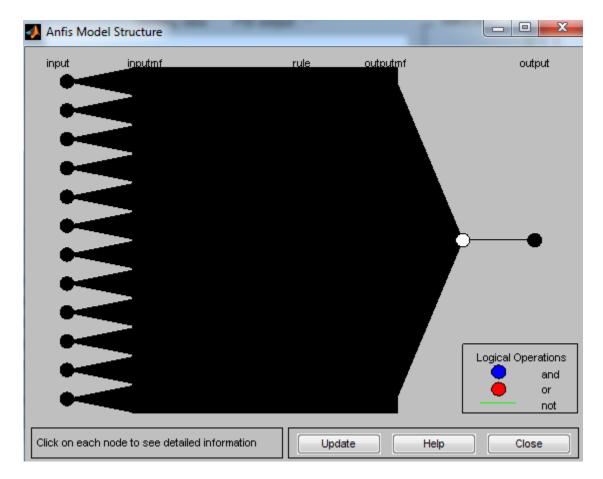


Figure 5: Testing Data Structure

The ANFIS model was trained for 20 epochs utilizing a hybrid optimization method with an error tolerance of 0.5. Subtractive clustering (Sub-clustering) was used to produce the FIS of the ANFIS model. The idea behind the Sub-clustering method is to divide the data space into fuzzy clusters, each representing a particular part of the system behaviour. Subtractive clustering is one-pass algorithm for estimating the number of clusters. The model parameters are updated in the training process utilizing hybrid optimization learning algorithm, the hybrid optimization learning algorithm is a combination of two optimization methods which are; gradient descent (backward pass) and least squares methods (forward pass). The least squares method (forward

pass) is used to optimize the consequent parameters and the gradient descent method (backward pass) is used to optimize the premise parameters.



The structure of the ANFIS model and the FIS is shown in Figure 6 and Figure 7 respectively:

Figure 6: ANFIS Model Structure

📣 FIS Editor: Diagnos	sis		
File Edit View			
		Diagnosis (sugeno)	f(u)
			COVID-19
FIS Name:	Diagnosis	FIS Type:	sugeno
And method	prod	Current Variabl	e
Or method	probor	■ Name	
Implication	min	▼ Type	
Aggregation	max	■ Range	
Defuzzification		Help	Close
System "Diagnosis": 1	2 inputs, 1 output, and 40	00 rules	

Figure 7: FIS

The ANFIS model was designed using Gaussian membership function. The membership function for each symptoms has three (3) linguistic labels which are; mild, moderate and severe. The membership function for one of the symptom "fever" is shown in Figure 8:

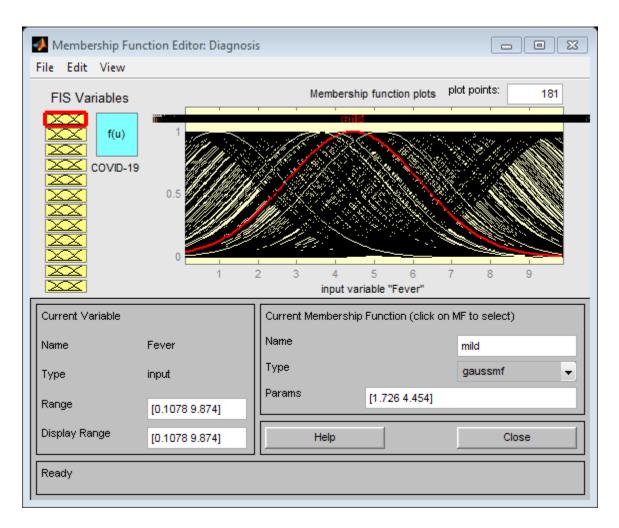


Figure 8: Membership Function for Fever

The ANFIS model was trained using the training dataset, the result achieved from training of the model showed that the system had a training error of 3.2876e-006 at epoch 1. The structure of the training model is shown in Figure 9:

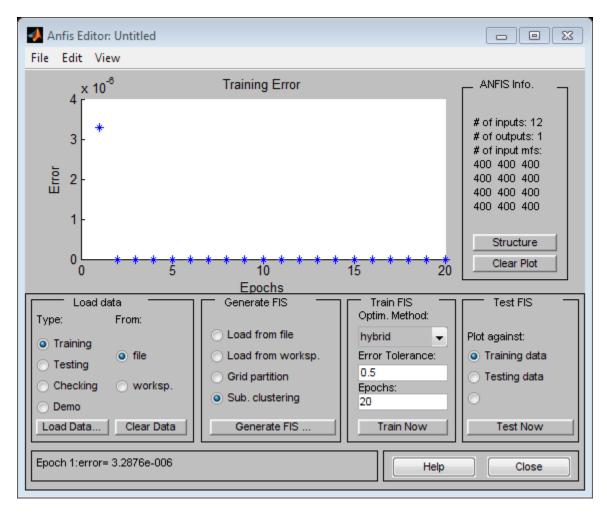


Figure 9: Training Model

The system had 400 fuzzy rules in the rule layer, the structure of the rule is shown in Figure 10:

Rule Viewer: Diagnosis				
ever = $4.99n2 = 5$ in $3 = 5in4 = 4.97n5 = 5.01n6 = 5.01n7 = 5.03n8 = 5.01n9 = 5.01in10 = 5n11 = 5.01n12cc5/ID-19 = 4.01n12cc5/ID-19 = 4.01n12cc$				
	AND NO		APERTIA LA LA PARAMANANA MANANA MA TANANA MANANA MANANA TANANA MANANA	

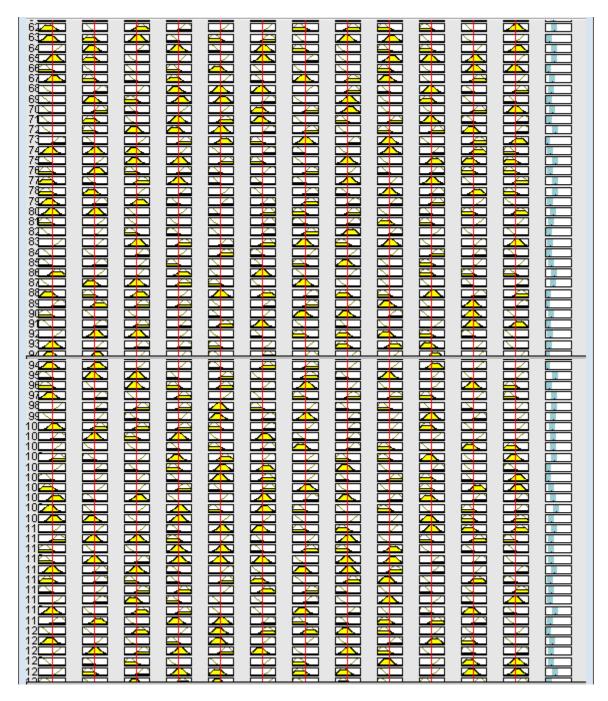


Figure 10: Rule Structure

After training of the ANFIS model, the model was tested using the test dataset. The result achieved from testing of the model showed that the system had an average testing error of 3.4254 on the test dataset. The result generated from the ANFIS model indicated that the model was able to accurately classify approximately 96.6% of the test dataset. The structure of the testing model is shown in Figure 11:

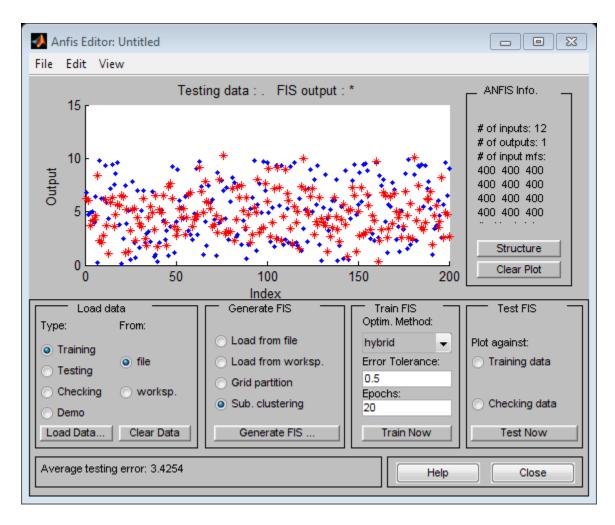


Figure 11: Testing Model

In this study, symptoms were used for diagnosing COVID-19 patients. The ANFIS model was trained and tested on the symptoms dataset collected. The ANFIS model had a prediction accuracy of 96.6%. The higher prediction accuracy achieved by the model can be traced to the learning capability of ANFIS to easily approximate non-linear functions and works as a universal estimator, the Takagi–Sugeno FIS of ANFIS and also the range of dataset used for the training and testing of the model [15]. The ANFIS model does not have any feature extraction or selection.

5.0 Conclusion

Detecting people infected with COVID-19 early and timely from the large number of population is imperative to prevent the spread of the disease to the masses. ANFIS model was proposed in this study for diagnosing COVID-19, the model reported high accuracy of 96.6%. This ANFIS model is cost effective, reduces uncertainties, processing time and will be beneficial in improving healthcare systems. With this model, timely and differential diagnosis of COVID-19 can be achieved and which in return helps doctors make clinical decisions easily and also reduce diagnostic errors. In subsequent studies, the ANFIS model can be implemented and also the model can be trained and tested by increasing the number of data instances of the dataset.

References

[1] AbdulAzeez A. Anjorin (2020). The Coronavirus Disease 2019 (COVID-19) pandemic: A review and an update on cases in Africa, Asian Pacific Journal of Tropical Medicine; 13(5): 199-203.

[2] WHO Coronavirus (2020). Retrieved on 13th July, 2020 from; https://www.who.int/healthtopics/coronavirus

[3] Cascella M., Rajnik M. and Cuomo A. (2020). Features, evaluation and treatment of coronavirus (COVID-19). Treasure Island (FL): StatPearls Publishing.

[4] Liu Q., Guan X., Wu P., Wang X., Zhou L. and Tong Y. (2020). Early transmission dynamics in Wuhan, China, of novel coronavirus-infected pneumonia. New Journal of Medicine; doi: 10.1056/NEJMoa2001316

[5] Chen Y., Liu Q. and Guo D. (2020). Emerging coronaviruses: Genome structure, replication, and pathogenesis. Journal of Medicine Virology; doi: <u>https://doi.org/10.1002/jmv.25681</u>

[6] WHO Coronavirus Symptoms (2020). Retrieved on 13th July, 2020 from; <u>https://www.who.int/coronavirus</u>

[7] Zhang F., Abudayyeh O. and Gootenberg J. (2020). A protocol for detection of COVID-19 using CRISPR diagnostics. Downloaded on 13th July, 2020. from; <u>https://www.broadinstitute.org/files/publications/special/COVID19%20detection%20(updated).p</u> <u>df</u>.

[8] Anagnostou T., Remzi M., Lykourinas M. and Djavan B. (2003). Artificial Neural Networks for Decision-Making in Urologic Oncology. Journal of European Urologic; 43, 596–603.

[9] Al-Shayea Q., El-Refae G. and Yaseen S. (2013). Artificial Neural Networks for Medical Diagnosis Using Biomedical Dataset. International Journal of Behavioral and Healthcare Research; 4, 45–63.

[10] Ohlsson, M. (2004). WeAidU: A Decision Support System for Myocardial Perfusion Images Using Artificial Neural Networks. Journal of Artificial Intelligence and Medicine; 30, 49–60.

[11] Ubeyli E. and Güler I. (2005). Automatic Detection of Erthemato-Squamous Diseases Using Adaptive Neuro- Fuzzy Inference Systems. Journal of Computing Biology and Medicine; 35, 421–433.

[12] Parthiban L. and Subramanian R. (2008). Intelligent Heart Disease Prediction System Using CANFIS and Genetic Algorithm. Citeseer; available online at: http://citeseerx.ist.psu.edu/viewdoc/download.pdf, accessed July 13th, 2020.

[13] Pandey B. and Mishra R. (2009). Knowledge and Intelligent Computing System in Medicine. Journal of Computing Biology and Medicine; 39, 215–230.

[14] Lee C. and Wang M. (2011). A Fuzzy Expert System for Diabetes Decision Support Application. IEEE Transactions on Systems, Man and Cybernetics; Part B 41, 139–153.

[15] Jang, Roger J. (1993). 'ANFIS: Adaptive-Network-Based Fuzzy Inference System', IEEE Transactions on Systems, Man and Cybernetics, Vol. 23, No. 3, pp. 665 – 685.

[16] Jang R. and Sun C. (1997). Neuro-Fuzzy and Soft Computing: A Computational Approach to Learning and Machine Intelligence. Upper Saddle River, NJ: Prentice-Hall, Inc.

[17] Alile S. and Otokiti K. (2020). A CoronaVirus Disease-2019 Prediction Model Based on Bayesian Belief Network. International Journal of Academic Engineering Research (IJAER); Vol. 4, Issue 4, 24-35.

[18] Narin A., Ceren K. and Ziynet P. (2020). Automatic Detection of Coronavirus Disease (COVID-19) Using X-ray Images and Deep Convolutional Neural Networks. arXiv preprint; arXiv:2003.10849.

[19] Sethy P. and Behera S. (2020). Detection of Coronavirus Disease (COVID-19) based on Deep Features. arXiv preprint; arXiv:2003.20985.

[20] Gozes O., Frid-Adar M., Greenspan H., Browning P., Zhang H. and Ji W. (2020). Rapid AI development cycle for the coronavirus (covid-19) pandemic: Initial results for automated detection & patient monitoring using deep learning CT image analysis. arXiv preprint; arXiv:2003.05037.

[21] Fatima M. and Samy S. (2020). Expert System for COVID-19 Diagnosis. International Journal of Academic Information Systems Research (IJAISR); Vol. 4, Issue 3, 1-13.

[22] Fu M., Yi S., Zeng Y., Ye F., Li Y. and Dong X. (2020). Deep Learning-Based Recognizing COVID-19 and other Common Infectious Diseases of the Lung by Chest CT Scan Images, medRxiv, 2020.