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Forecasting regarding the end of COVID-19 and successful development of vaccine based on astrological aspects and artificial intelligence

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Abstract
This paper deals with the development of Knowledge Base System to forecast about the End of Covid-19 & to predict the successful development of Vaccine based on Astrological Aspects & Artificial Intelligence. The Astrological parameters and Social & Environmental conditions of the nation/state/city are taken to bring in the procedure of the diagnostics exactly in line with the process being adopted by the Human Experts. The Astrological parameters are handled by Fuzzy Rules criteria while the Social & Environmental parameters are handled directly as input to the Aggregation Unit. The final forecasting is carried out by taking an overall view of the effects made individually from each Planet and the Social & Environmental conditions. The system has been tested using previous pandemics namely: Spanish flu, The First Cholera and Marseille Ka Plague, held in the years1918-1920, 1817-1824 & 1719-1723 respectively. The test results are highly encouraging and after carrying out exhaustive testing in the Astrological & Artificial Intelligence environment, the developed system can be reliably used for the forecasting of beginning & END of pandemics in the different parts of the Countries/Worlds.

Keywords: Artificial intelligence, astrological aspect, COVID-19 forecasting, vaccine

Introduction
Corona Virus COVID-19 pandemic is affecting that the whole world. Different organizations, experts are busy in finding out severity of spreading Corona in different ways. However there is no information regarding Severity of COVID-19, i.e. when the Corona Virus pandemic ends and when the Vaccines will be developed. This paper describes that the combination of Astrological Aspects and Artificial Intelligence is helpful in determining the END of COVID-19 and about the development of the Vaccines. So, duration of pandemics defined in this paper, will be helpful in deciding the course of action and Protection & safety measures against viral diseases.

Astrology
Astrology is a scientific tool gifted by God to mankind. "Astrology means message of Stars". Astro (jyothi) means light and light rays which are naturally emanated from Sun, Moon, Stars, and Planets etc. The effect of these rays on living beings and also on the environment, climatic conditions, seasons etc., made the study of these rays compulsory. This study is called Astrology [1]. In ancient time the primitive people realized that the moments of Sun, Moon and other planets follow a particular pattern and they play a vital role in the lives of human beings. So, they started deriving conclusions, from a constant study with great curiosity and deep observations providing thought, experiments, tests etc., So, Astrology otherwise called Jyotishasastra is prominent and primitive sciences. Since Astrology directs to life style of a man or the happenings in nature. Every aspect of science has a cause. But existence of a cause is different from noticing the cause. Depending on the changes in the society the causes are changing. Hence one should study this with much concentration and understanding.

Horoscope
It is a map of heavenly bodies on a piece of paper. Zodiac (Universe) is divided among 12 Sign or Rasi. Each Rasi Spans 30 Degrees. Twelve houses are casted with first house called as Janmalagna or Ascendant.

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Planetary positions are marked on the chart with longitudes with respect to earth. Starting point is called Aries sign at zero degrees. In western methods these planetary positions are marked on the chart with longitudes with respect to earth. Starting point is called Aries sign at zero degrees. In western methods these are known as Aries, Taurus, Gemini, Cancer, Leo, Virgo, Libra, Scorpio, Sagittarius, Capricorn, Aquarius and Pises. There are 27 Constellations in Unverse.

First Constellation is Ashwini and the Last Rewati. Span of each Constellation is 13 Deg 20 Min of the Zodiac Space. It is further divided in the proportion of Vimshottari Dasa and Sequence Starts from Owner of the Constellation

Duration of various planets in one sign
- **Sun:** Sun takes approximately 30 days to travel through each sign.
- **Moon:** Moon goes through all twelve signs in about 28 days. It takes approximately 2½ days in each sign.
- **Mercury:** Mercury takes around 1 year to travel through all 12 Zodiac signs. Mercury stays for 14 to 30 days in a sign depending on the motion.

- **Venus:** Venus stays for approximately 23 days to a little over 2 months in a sign (depending on the motion).
- **Mars:** Mars takes about 23 months to travel through all the Zodiac signs. Mars stays for about 1.5 months in a sign.
- **Jupiter:** Jupiter takes about 12 years to travel through all 12 Zodiac signs. Jupiter stays for 1 year in a sign.
- **Saturn:** Saturn is a very slow moving planet. It takes around 29½ years to travel through all 12 Zodiac signs. Saturn stays for approximately 2½ years in a sign.
- **Rahu and Ketu:** The moons nodes Rahu and Ketu always move in a retrograde motion. Rahu and Ketu take around 1.5 years to travel through each Zodiac sign

Significance of planets in various signs
The significance of various Planets in different houses is shown in Table-1. In some houses they are exalted and in some houses they are Debilitated Sign. Placement of a planet under a Zodiac sign decides the result that a planet will give during that period.

Table 1: Significance of planets in various signs

	Sun	Moon	Mars	Mercury	Jupiter	Venus	Saturn
Uchch rasi Exalted sign	1 Mesh (Aries)	2 Vrishabh (Taurus)	10 Makar (Capricorn)	6 Kanya (Virgo)	4 Kark (Cancer)	12 Meen (Pieces)	7 Tula (Libra)
Neech rasi Debilited sign	7 Tula (Libra)	8 Vrishchik (Scorpio)	4 Kark (Cancer)	12 Meen (Pieces)	10 Makar (Capricorn)	6 Kanya (Virgo)	1 Mesh (Aries)
Friend's rasi	4, 8, 9, 12		4, 5, 9, 12	2, 6, 7, 10, 11	1, 5, 8	3, 6, 10, 11	2, 3, 6
Enemy's rasi	2, 3, 6, 7, 10, 11		2, 3, 6, 7, 10, 11	1, 4, 5, 8, 9, 12	2, 3, 6, 7, 10, 11	1, 4, 5, 8, 9, 12	1, 4, 5, 8, 9, 12

Good and bad places in the horoscope
Good and bad places in the horoscope are shown in the Table 2.

Table 2: Good and bad places in the horoscope

S. N.		
1.	Kendra	Bhavs 1, 4, 7 and 10 are called "Kendras" These are good places.
2.	Trikona	Bhavas 1, 5, 9 are called ''Trikonas''. These are good places.
3.	Triks	Bhavas 6, 8, 12 are called ''Triks''. These are bad places.
4.	Other	Other Bhavas 2, 3, 11 are medium places.

Aspects of planets
The Full aspects, ¾ aspects, ½ aspects and ¼ th aspects of planets are shown in Table 3.

Table 3: Aspects of planets on various houses

S.N.		1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th
1.	Sun			¼	¾	½		1	¾	½	¼		
2.	Moon			¼	¾	½		1	¾	½	¼		
3.	Jupiter			¾	¼	1		1	¼	1	¾		
4.	Mars			½	1	¾		1	1	¾	½		
5.	Mercury			¼	¾	½		1	¾	½	¼		
6.	Venus			¼	¾	½		1	¾	½	¼		
7.	Saturn			1	½	¼		1	½	¼	1		
8.	Rahu				1			1	1		1		
9.	Ketu			1				1	1				

Planets and five elements
The five elements fiery, earthy, airy, sky and watery are governed by planets. Fiery element (Agni tattva) is ruled by Mars. Sun also has the same nature. Earthy element (Bhoo tattva) is ruled by Mercury. Airy element (Vaayu tattva) is ruled by Saturn. Ethery element (Aakaasa tattva) is ruled by Jupiter. Watery element (Jala tattva) is ruled by Venus. Moon also has the same nature.

Manual quantitative measurement of the planetary parameters was introduced by various Astrologers. Different Systems in astrology has different set of rules and procedures but arrives at the same.

Development of knowledge base system
A good amount of work has been carried out by a number of workers based on Astrology only. The analysis of the planetary position & their aspects using Artificial Intelligence provides valuable information and has proved to be useful tool in the forecasting of beginning & END of pandemics in the different parts of the Countries/Worlds & successful development/arrival of Vaccine.

In general, human knowledge is vague and imprecise. Human thinking and reasoning frequently involve inexact information. Knowledge Base Systems should, therefore, be able to cope up with such inexact and incomplete information, from the following possible sources: inherent human fuzzy concepts, unreliable information, matching of similar rather than identical experiences, and differing (expert) opinions [2]. A major bottleneck in building knowledge base system is the process of acquiring the required knowledge in the form of production rules. Some of the weights of the parameters are embedded in the knowledge base (KB) after training the system with known cases. Initially these weights are selected randomly. Then these weights are used in construction of production rules. It is important and sometimes essential for the success of learning that suitable knowledge representation scheme be chosen (Classification knowledge). It is essential that knowledge representation in the Systems should be as clear as possible [3, 4]. The knowledge in present system is contained in the form of IF-THEN rules. The knowledge is

captured in IF-THEN rules with fuzzy predicates that establish relations between the relevant system variables. However, knowledge acquisition is not an easy task. The KB itself is a major source of uncertain information in knowledge base systems, and the causes for the same are unreliable information, imprecise descriptive languages, experts not always available and their knowledge not always consistent, systematic and complete, and also often incomplete and episodic and poor combination of knowledge from different experts [4, 5]. The knowledge for classification problems is expressed by each fuzzy rule with local representation or local approximation. In general, local representation-based methods including look-up tables, nearest-neighbor algorithms and Radial Basis Function Networks (RBF) have the advantage of small computation time and yielding intelligent representation. One of the local representations by fuzzy rules is that the fuzzy rules partially overlap with each another [6]. The KB consists of a database and a linguistic rule base. The database provides necessary definitions, which are used to define linguistic control rules. The rule base characterizes the control goals and control policy of the domain experts by means of a set of linguistic control rules. The standard values of the Ephemeris of planets in different signs in previous pandemics are placed in the KB are used to carry out the comparison with the present Ephemeris of planets in different signs to find out their matching with the values of different category of pandemics.

Generation of knowledge base
Different software systems for supporting the process of decision making are widely used in the last two decades. One type of such systems is the fuzzy rule-based systems. Their unique features, such as implementation of human knowledge, error tolerance, and the ability relatively easily to create models of complex dynamic and non-deterministic systems with volatile and uncertain parameters, turned them to commonly used technology in many areas of practice. In order to make a connection between traditional knowledge-driven approach and data-driven approach, Fuzzy rule based system can serve as knowledge aspects, description, and reasoning in the process of decision making.

In this work, successful application of fuzzy/possibility representation of measurement/uncertainty has been made for the determination of duration of pandemics. This approach is particularly interesting for imprecise measurements and human estimations, which do not satisfy probability assumptions. Moreover, uncertainty propagation is made in a simple way, which is a generalization of interval analysis, yielding both worst case results and best estimates at the same time. A Fuzzy Rule model capable of fuzzy classification of patterns has been defined and tested. The model converts numerical and linguistic inputs to linguistic terms, and provides output decisions. The inclusion of some knowledge parameters such as weights is necessary for enhancing the power of representation of the system. The system proposes refining procedure for knowledge parameters in the form of fuzzy rules to improve the learning performance of the system, instead of increasing the numbers of linguistic terms or the complexity of the system.
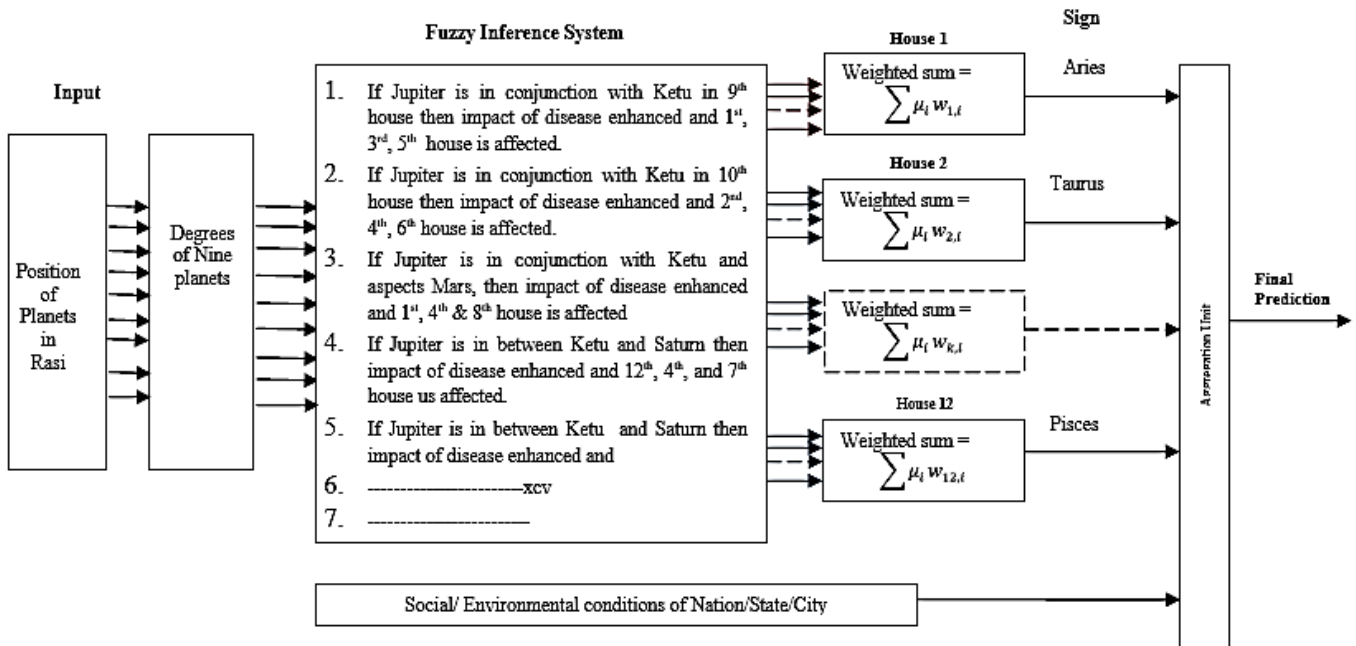

Fig 1: Block diagram of the knowledge base system

Fig. 1 shows the complete schematic block diagram of the knowledge base system, which has been developed for duration of pandemics in this work. It consists of Planetary position of in different Zodiac sign, Degrees of nine Planets, fuzzy inference System (Rule Base), weighted sum and social/Environmental conditions of nation given to Aggregation Unit for final decision. Also in case of dense population and/or bad weather conditions such as rainy or severe cold, the effect of pandemics enhanced. The effect of cumulative effect of planetary aspects on all 12 houses/sign is shown in Fig 1.

The outputs of these two systems are given to an aggregation unit for final prediction. The Ephemeris of Jupiter, Rahu, Ketu and Saturn for the three groups, consisting of pandemics- Spanish flu, The First Cholera and Marseille Ka Plague, held in the years from 1918-1920, 1817-1824 and 1719-1723 respectively shown in Tables 4 &5 have been taken from literature. The data of Table 4 have been used as the KB for developing and testing the system.

Table 4: Knowledge base for pandemics based on planets ephemeris in world

S. No.	Date	Jupiter	Saturn	Mars	Sun	Moon	Rahu	Ketu	Comments	
1	22.06.1719	10:32:32	17:16:37	11:20:43	09:46:40	29:44:47	10:51:05	10:51:05	Jupiter & Rahu conjunction in Leo & Saturn in Libra	Marseille Ka Plague begins
2	06.06.1723	03:29:14	03:25:00	01:33:16	25:31:48	14:19:37	02:15:34	02:15:34	Jupiter is ahead of Saturn in Libra	Marseille Ka Plague end
3	21.01.1817	13:30:36	02:14:12	06:35:44	09:46:21	23:40:18	13:09:43	13:09:43	Jupiter & ketu Conjunction in Scorpio	The First Cholera begins
4	18.05.1824	18:47:22	05:46:27	04:08:55	05:21:477	01:58:12	18:47:58	18:47:58	Jupiter is ahead of Ketu	The First Cholera end
5	09.05.1918	22:28:11	15:39:03	22:03:53	24:48:06	03:45:52	29:55:28	29:55:28	Jupiter & Ketu conjunction in Taurus & Saturn in Cancer	Spanish flu begins
6	29.05.1918	26:55:32	16:59:20	27:07:03	13:56:07	19:46:27	29:30:05	29:30:05	Jupiter is ahead of Ketu in Taurus & Saturn in Cancer	Spanish flu spread
7	04.06.1919	24:20:41	00:03:45	13:21:13	19:39:59	00:49:36	11:04:07	11:04:07	Ketu in Taurus, Jupiter in Gemini And Saturn in Leo	Spanish flu spread
8	10.06.1919	29:41:16	18:01:10	01:10:32	25:32:29	08:26:08	29:29:30	29:29:30	Jupiter ahead of Ketu and Saturn in Cancer	Widely spread
9	01:07:1919	00.:08:00	02:28:00	02:14:00	15:41:00	01:11:00	09:26:00	09:26:00	Jupiter in Cancer receiving 9th aspects of Rahu	Widely spread
10	27.12.1919	24:35:00	19:01:00	21:27:00	11:47:00	6:50:00	29:57:00	29:57:00	Rahu in Libra	Spanish flu is about to end

Table 5: Knowledge base for COVID-19 in India

S. No.	Date	Jupiter	Saturn	Mars	Sun	Moon	Rahu	Ketu	Comments	
1	5.11.2019	00:07:11	21:37:40	26:51:28	18:46:33	00:11:20	16:10:57	16:10:57	Jupiter & Ketu conjuction in Sagittarius & Saturn in Cancer	Pandemic begins
2	07.1.2020	14:27:07	28:14:48	09:49:20	24:23:39	05:07:45	14:18:27	14:18:27	Jupiter is ahead of Ketu in Sagittarius & Saturn in Sagittarius	Covid-19 identified
3	30.01.2020	19:11:09	00:43:29	24:09:34	15:49:29	15:10:53	13:45:59	13:45:59	Jupiter & Ketu conjuction in Sagittarius and Saturn in Capricorn	Covid-19 begins in India
4	22.3.2020	28:56:27	05:52:11	29:52:45	07:44:21	12:54:04	10:04:34	10:04:34	Jupiter & Ketu conjuction in Sagittarius and Mars & Saturn in Capricorn	Protected through Lockdown
5	31.03.2020	19:56:29	12:34:36	28:36:33	16:27:23	26:45:50	22:51:23	22:51:23	Ketu in Sagittarius and Jupiter, Mars & Saturn in Capricorn	Covid-19 Spread
6	04.05.2020	02:55:57	07:46:38	00:11:24	20:55:55	16:45:42	05:53:14	05:53:14	Ketu in Sagittarius and Jupiter & Saturn in Capricorn and Mars in Aquarius	Continuously spread
7	19.06.2020	01:15:20	06:41:11	00:26:12	03:52:52	06:12:13	04:59:00	04:59:00	Ketu in Sagittarius and Jupiter & Saturn in Capricorn and Mars in Pisces	Continuously spread
8	17.08.2020	24:20:20	02:34:29	00:35:55	01:02:09	12:14:28	03:28:37	03:28:37	Jupiter & Ketu in Sagittarius and Saturn in Capricorn and Mars in Aries	Widely spread
9	23.09.2020	23:26:00	01:12:48	02:21:19	07:01:07	00:54:09	29:47:14	29:47:14	Ketu in Scorpio, Jupiter in Sagittarius & Mars in Aries	Widely spread
10	04.10:2020	24:02:07	01:14:03	29:59:18	17:36:07	17:20:18	28:16:34	28:16:34	Ketu in Scorpio, Jupiter in Sagittarius & Mars in Pises	Continuously spread
11	20.11.2020	00:01:32	03:21:54	21:07:36	04:33:19	13:38:53	25:57:47	25:57:47	Jupiter in Capricorn receiving 9th aspects of Rahu	Widely spread

Formation of rules
The rule base of the system is formed with the backward rules where preconditions are formed with only conjunctions or disjunction of simple proposition or combinations of the two and conclusions with a simple proposition each. These rules are formed by combining the experience of astrology with the standard technique of knowledge engineering (production rule technique) and known cases of pandemics [7]. Once the rules have been modeled, an interference procedure is necessary to drive conclusions from uncertain condition [8-10]. It is shown in this work as how the fuzzy rules can estimates the class membership of a set of input data by combining degrees of certainty coming from different sources. When making pandemics analysis by means of mathematical decision rules, one of the important considerations is interdependency of important parameters. If there is a choice, then the best choice is to have independence of pandemics parameters; because this will simplify construction of the rule and enhance its efficiency. Following rule base has been formed from the range of the parameters available in the KB:

IF-THEN rules
1. IF Jupiter AND Ketu are in conjunction AND Ketu is ahead of Jupiter in same sign AND Saturn is ahead of Jupiter THEN the pandemics-BEGINS.
2. IF Jupiter AND Ketu are in conjunction AND Jupiter is ahead of Ketu in same sign AND Saturn is ahead of Jupiter THEN the pandemics-IDENTIFIED
3. IF Jupiter AND Saturn are in conjunction AND Saturn is ahead of Jupiter in same sign AND Jupiter is between Ketu & Saturn THEN the pandemics-SPREAD
4. IF Jupiter AND Saturn are in conjunction AND Jupiter is ahead of Saturn in same sign AND Jupiter is expected by Rahu THEN the pandemics-SPREAD
5. IF Jupiter is in between Ketu & Saturn AND Saturn is ahead of Jupiter THEN the pandemics-SPREAD
6. IF Saturn is ahead of Jupiter AND Rahu aspects Jupiter THEN the pandemics-SPREAD
7. IF Jupiter AND Saturn are in conjunction AND Jupiter aspects the Mars & Sun/ Mars or Sun AND Saturn is ahead of Jupiter in same sign AND Jupiter is between Ketu & Saturn THEN the pandemics-SPREAD widely.
8. IF Jupiter AND Saturn are in conjunction AND Jupiter is ahead of Saturn in same sign AND Jupiter is expected by Rahu AND Jupiter aspects the Mars & Sun/Mars or Sun THEN the pandemics-SPREAD widely

9. IF Jupiter AND Saturn are in conjunction AND Jupiter is ahead of Saturn in same sign AND Jupiter is not expected by Rahu THEN the pandemics-ENDS start.
10. IF Jupiter is ahead of Saturn in next sign AND Jupiter is not expected by Rahu THEN the pandemics-ENDS completely.

Severity of the pandemics is also decided by how many houses are affected by Jupiter, when Jupiter is in conjunction with ketu or in between Ketu & Saturn.

Results and Discussions
In this work, a Knowledge Base System has been developed and tested to Determine End of Covid-19 & Successful Development of Vaccine Based on Astrological Aspects & Fuzzy Rules, Small number of rules to reduce model complexity which allows us to obtain the simplest model that yields the desired performance. However, during training if the system performance is not adequate, in that case, number of rules was increased and initial weights were reset. Data from three Pandemics-were used to generate expert rules which help the beginning & end of Pandemics and the performance was comparable to that of an experienced expert. Selection of planetary aspects for KB system is a crucial aspect. Indeed, some planetary aspects introduced in the fuzzy enhance its knowledge representation power and can improve its learning accuracy, but simultaneously lower the comprehensibility of the fuzzy inference system. One problem is encountered to decide as what planets should be introduced for fuzzy inference system so as not to lower its comprehensibility. In this work, only important planetary positions are considered.

When observations do not exactly match with the antecedent part of the rule, approximate matching and reasoning should be deduced as consequent. Fuzzy matching and fuzzy reasoning play a key role in the approximate reasoning process. This type of matching and reasoning is very human like, since in many situations human beings have to make decisions based on incomplete and fuzzy information.

Incorporating this capability into the knowledge-based system is necessary. Here four Planets were used to calculate Pandemics. The classification is based of different categories on the basis of results from the experimental data from the literature and the Expert's observations. The testing was carried out on known data set. In many applications, although we may have observations on the system but may not be able to find experts who can provide an organized rule base. In these situations, a crucial problem in the development of the system is the learning of the structure of the rule base and the problem of knowledge acquisition. The fuzzy KB is responsible for storing the knowledge entities, such as the objects, rules, and fuzzy terms of a KB, acquired through the Knowledge acquisition subsystem. These knowledge entities, representing expertise, provide information that enables the inference engine to perform consultations.

Prediction on vaccine
As per the planetary position, from 20.11.2020 onwards, Ketu is in Scorpio, Jupiter & Saturn is in Capricorn. And Saturn is ahead of Jupiter so Jupiter is receiving the 9th aspects of Rahu. From 21.12.2020 onwards, Jupiter will be ahead of Saturn and Saturn will receive the 9th aspects of Rahu and Jupiter will not receive the aspects of Rahu. Also 5th aspects of Jupiter will be on Rahu therefore Rahu gives positive effect on the pandemic. Here Saturn work as a wall/shield to protect Jupiter, resulting in successful development of that First vaccine. On 12.01.2021, due to conjunction of Sun & Saturn, Saturn becomes combust so again aspects of Rahu come on Jupiter and Cobid-19 again spread slightly. On 13.02.2021 Saturn raises, hence again Saturn will work as a wall/shield to protect Jupiter. Hence the Covid-19 will almost end and Second vaccine will be arrived. On 6.4.2021 Jupiter enter in Aquarius and Covid-19 starts vanishing. Also Third vaccine will be arrived and last patient will be recovered. Again on 21.11.2021 Jupiter enter in Aquarius therefore Fourth vaccine will be arrived.

Table 6: Forecasting regarding the end of COVID-19 and successful development of vaccine in India

S. No.	Date	Jupiter	Saturn	Mars	Sun	Moon	Rahu	Ketu	Comment	Status of pandemic	Status of vaccine
1	21.12.2020	06:56:29	06:38:17	00:04:40	08:59:35	04:45:28	25:45:12	25:45:12	Jupiter is ahead of Saturn in Capricorn	Covid-19 will be about to end	First Vaccine on 21.12.2020 at 08:10 am will be arrived
2	12.01.2021	11:16:00	08:51:00	08:24:00	28:12:00	17:01:00	24:11:00	24:11:00	Saturn combust	Covid-19 will be spread again slightly	
3	19.01.2021	12:54:00	09:41:00	11:50:00	05:19:00	18:40:00	23:49:00	23:49:00	Jupiter combust	Covid-19 will be spread again slightly	
4	12.02.2021	18:35:00	12:31:00	24:36:00	29:41:00	06:24:00	22:33:00	22:33:00	Jupiter rises	Covid-19 will be about to end	
5	13.02.2021	18:49:00	12:38:00	25:09:00	00:42:00	19:18:00	22:29:00	22:29:00	Saturn rises	Covid-19 will be end	Second vaccine at 03:04 pm will be arrived
6	06.04.2021	00:03:07	17:36:15	25:17:39	22:13:47	13:14:47	18:22:27	18:22:27	Jupiter in Aquarius	Covid-19 Completely vanishes and last patient will be recovered	Third vaccine at 03:00 am will be arrived
7	15.09.2021	29:51:19	13:14:46	06:16:39	28:56:22	21:27:28	10:32:59	10:32:59	Jupiter & Saturn in Capricorn and Jupiter is ahead of Saturn	No Pandemic	
8	21.11.2021	29:53:39	14:00:24	19:15:29	03:08:34	03:48:16	07:32:15	07:32:15	Jupiter in Aquarius and Saturn in Capricorn	No Pandemic	Fourth vaccine at 08:50 am will be arrived

Conclusions
In this work, a fuzzy rule base knowledge base system has been developed for determination of duration of COVID-19 pandemic situation. The system is capable of handling

uncertainty and/or impreciseness in the input representation provided in quantitative, linguistic and/or set forms. The output decision is inferred in terms of values to one or more output classes. The Implementation of the fuzzy rule base

system for Pandemics has following advantages: (i) Any initial heuristic knowledge is incorporated into the system prior to its learning and, hence, reduces the learning effort, (ii) It is possible to mix a priori information of the human expert and information extracted from the data, (iii) The proposed model predicts successfully all the events related to past pandemic situation with 100% accuracy.

It is observed that the following planetary position will responsible for pandemics (i) Jupiter conjunct Ketu or Rahu and Saturn is ahead in the same sign or next sign of Jupiter & Ketu, (ii) Rahu aspects Jupiter and Saturn is ahead of Jupiter in the same sign or next sign, (iii) Jupiter is in between Ketu & Saturn in same sign or next sign and (iv) Jupiter is in between Rahu & Saturn in same sign or next sign.

Acknowledgement

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