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Protecting tribal peoples nearby patient care centres use a hybrid techniques based on a distribution network

M. Srikanth
Assistant Professor, Dept of Information Technology, Vishnu Institute of Technology (A): Bhimavaram
Email: srikanth.m@vishnu.edu.in

Padma Bellapukonda
Assistant Professor, Dept of Information Technology, Shri Vishnu Engineering College for Women (A): Bhimavaram
Email: padmabellapukonda@svecw.edu.in

Manikanta Sirigineedi
Assistant Professor, Dept of Information Technology, Vishnu Institute of Technology (A): Bhimavaram
Email: manikanta.s@vishnu.edu.in

***Abstract*---**Adivasi, or tribal, indigenous cultures are home to over a hundred million Indians. Tribes now account for about 8.5 percent of the Indian population. The majority of tribal communities can be found in central India, from west to east, with a few others in the country's north and east. Tribes have left a rich legacy of folklore, ecology, agriculture, art forms and regional artisan methods. Now we'll start with the tribal's of Andhra Pradesh. The majority of them are currently dealing with a wide range of medical health issues, including malnutrition, maternal and child health issues, hereditary diseases, mental health issues, communicable diseases, specialist disorders, and non communicable illnesses. Another major issue is that tribal people are uneducated and live in impoverished areas, so they have no idea what to do or what not to do. There is also a lack of health-related awareness, a lack of healthcare facilities in remote rural areas, a lack of emergency transportation, discriminatory behaviour by healthcare providers. All of the issues mentioned above have an impact on tribal people. As a result, in this paper, we propose to Protecting Tribal Peoples nearby Patient Care Centres Use a Hybrid Techniques Based on a Distribution Network. In this case, we take up hybrid technologies such as machine learning, IoT, patient tracking systems and nearby patient care based on distribution technologies. When we use these hybrid technologies, we slowly reduce all of these

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medical related problems and improve the health of the tribal population.

***Keywords*---**Tracking system, Machine Learning, sentimental analysis, Nearby Patient care system, Distribution Network.

Introduction

Census-2011 says that there are 10,428,103 scheduled tribes in India. There are 9,381,162 people from scheduled tribes who live in rural areas. Scheduled tribes account for 8.6% of the total number of people in India and 11.3% of the urban population. Tribal area people's facing lot of medical related issues and other related issues like Lack of awareness of health issues, Lack of health facilities in remote rural areas, Lack of emergency transportation. The above issue are impacting to tribal population and those who facing medical problem and patient missing in-time medical related treatment.

Machine learning algorithms, fed by historical data, may accurately predict the results of a query. Whatever goes here, this includes fraud, tribe turnover, and anything else you can think of. Insights gained from these can be used to enhance medical practise. If a model predicts that a consumer from a Native American community is leaving, the medical centre can tailor outreach efforts to that person.

A supply chain's distribution network is made up of warehouses and shipping services that work together to store and distribute medical supplies to those who need them. To put it another way, it mediates transactions between producers and consumers in remote tribal areas. Having a quick and trustworthy distribution system is crucial in today's instant gratification culture. Two of the most crucial aspects of any distribution network are accessibility and proximity to indigenous communities. Specific distribution models like hub-and-spoke and decentralised systems are well-suited for specific product lines.

Patient Track can help you cut wait times by up to 70% and keep your team productive. Patient Track provides world-class patient tracking solutions that may be utilised in any healthcare setting where patient flow needs to be managed. Our technologies are both economical and scalable and may be used by single-provider clinics, big hospital groups, and multi-facility healthcare organisations. Tribals must need how to take care of health care, here we are providing medical awareness of Healthcare Animation (or healthcare explainer video) an explainer video is used in the Health trade to explain medical and healthcare terms. In real life, healthcare animation videos are used for many purposes such as medical products/services introduction, training, public awareness, marketing, etc. 2D animation is the most common and favourite type of healthcare video in this trade.

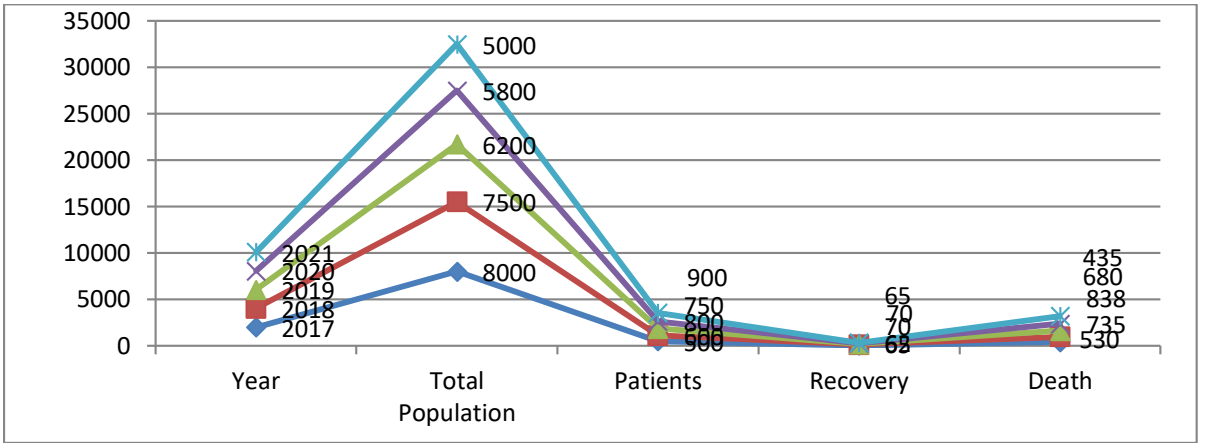
Related work

1. Existing Tribal's facing medical issues of impacting tribal population:

5.6% of the people living in the country at the time of the 1951 census were tribal. Census-2011 says that there are 10,428,103 scheduled tribes in India. It's 8.6% of the total number of people in India. There are 9,381,162 people from scheduled tribes who live in rural areas and 1,046,872 people who live in cities. The scheduled tribes make up 11.3% of the people who live in rural areas and 2.8% of the people who live in urban areas. There are 9,381,162 people from scheduled tribes who live in rural areas and 1,046,872 people who live in cities. The scheduled tribes make up 11.3% of the people who live in rural areas and 2.8% of the people who live in urban areas. India's population grew by 17.64 percent over a ten-year period, from 2001 to 2011. However, in later years, the tribal people have encountered medical issues and are unsure of how to care for their health. Major tribes like Chenchu, Yandai, Kurumba, Khond, Bagdaz, Koya, Bagata, Gadaba, etc. live in Andhra Pradesh and Telangana. This area has a lot of medical problems and other related issues like Lack of awareness of health issues, Lack of health facilities in remote rural areas, Lack of emergency transportation, Discriminatory behaviour by health care providers, and the tribal population has been decreasing over the past 5–10 years. This is because the area isn't aware of medical-related care, undeveloped or uneducated areas, so people don't know what to do or what not to do. Some of the medical problems they face are malaria, malnutrition, child mortality, maternal health problems, family planning and infertility, addiction and mental health problems, sickle cell disease, animal bites and accidents, low health literacy, poor health, etc. Another point to consider is that nowadays, every 1000 people have only one doctor. So, in this ratio, it's very difficult to get doctor's care, so here we use hybrid technologies based on the distribution network of nearby tribal patient care. This paper says with confidence that in tribal areas, we can gradually reduce all medical-related health issues and definitely get a healthy environment and a healthy life for tribal people. We are checking last 5-10 years tribal area medical issues and recovery and death ratio. In the year 2017,2018,2019,2020 and 2021 total Andhra Pradesh tribal population 8000,7500,6200,5800,5000 this are facing medical issues their didn't get any medical related treatment so mostly tribal's dead. Gradually year by year ,monthly by monthly and day by day most of the tribal's getting medical problems there don't know how take care of their health.

Table1: Existing Tribal patient death rate statistics

Year	Total Population	Patients	Recovery	Death
2017	8000	500	65	435
2018	7500	600	70	530
2019	6200	750	70	680
2020	5800	800	65	735
2021	5000	900	62	838



2. Machine learning model predictions enable tribal medical issues to be addressed:

Using historical data, machine learning models may create highly accurate predictions about the results of a query, which can be about anything from tribal turnover to fraudulent behaviour and beyond. These offer doctors new perspectives that have quantifiable benefits for patients. If a model indicates that a certain tribal member is likely to churn, the medical centre can tailor its messages and outreach to that individual. This algorithm uses a support vector machine to solve classification and regression problems; in particular, it is used to solve the former. The data points for each tribal patient are represented as points in an n-dimensional space; SVM requires only the coordinates of each observation to classify them. Which method most effectively divides the groups? Furthermore, support vector machines are especially useful for treating tribal patients. The term "support vector" is used to describe a set of data points that are most similar to the hyper plane. In hyper planning, the area for making choices is partitioned according to the kinds of items involved. Max, Margin can be thought of as the angle between a line and the support vector, and is thus a measure of how far apart the lines passing through the closest data points of various classes are. The maximum margin is regarded as an excellent margin.

Algorithm: SVM

Inputs: Find the different sets of training and test data.
Output: Find the calculated precision.
Choose the best cost and gamma parameters for support vector machines.
While (stopping condition is not met) do
    Implement SVM train step for each data point.
    Implement SVM classify for testing data points
end while
Return accuracy

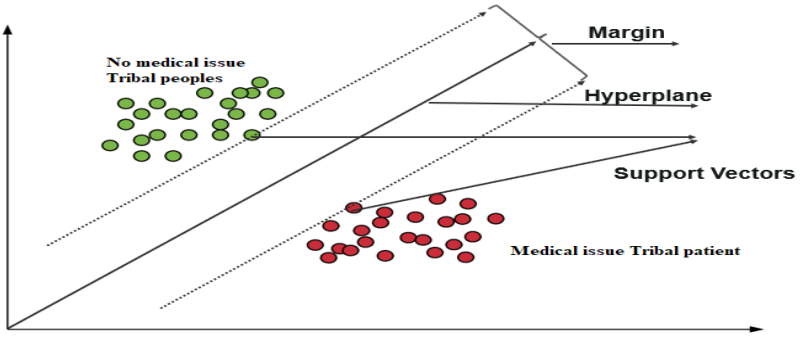


Figure: Tribal medical issues classification using SVM

2. Creating Distribution Network for nearby Patient care

Supply chains often include a distribution network, which consists of a series of warehouses and transit mechanisms for storing and distributing goods, such as medical kits, to those in need. It acts as a conduit between the producer and the end-user tribal regions, either immediately or via a distribution network. In today's instant gratification environment, a fast and dependable distribution network is crucial. The availability of reliable transportation options and close proximity to indigenous populations are two crucial elements of any effective distribution system. Hub-and-spoke and decentralised distribution networks, for example, are just two of the many possible configurations. But what steps should be taken to ensure a high-performing distribution network is created?. If you want to know which parts of your medical distribution channel require work and which ones you might have to give up on, you need to a) keep track of your channel tribal partners. Plan on opening a new location if you are forced to close one in order to expand your distribution network and make up for the lost revenue. For the purpose of b) Keeping tabs on and managing stock, the averages can be calculated by taking an accurate count of the number of medical supplies you have on hand at each of the outlets frequented by tribal people. Also, it could be a good idea to maintain a database of all of your marketing efforts across all of your distribution channels. Pay close attention to regional and local markets (option c): You have ignored a sizable portion of the health care industry's potential revenue stream. This could be due to the high concentration of tribal members in the area, necessitating the care of a larger patient population. As a cover for doing machine learning in secret, you can keep sending surveys and promotional surveys to the people you want to reach in tribal areas. If medical marketing programmes are launched ad hoc in tribal areas, consideration should be given to the health care systems and medical histories of other great distribution networks. d) Focus on compartmentalizing. It's possible that something happened there.

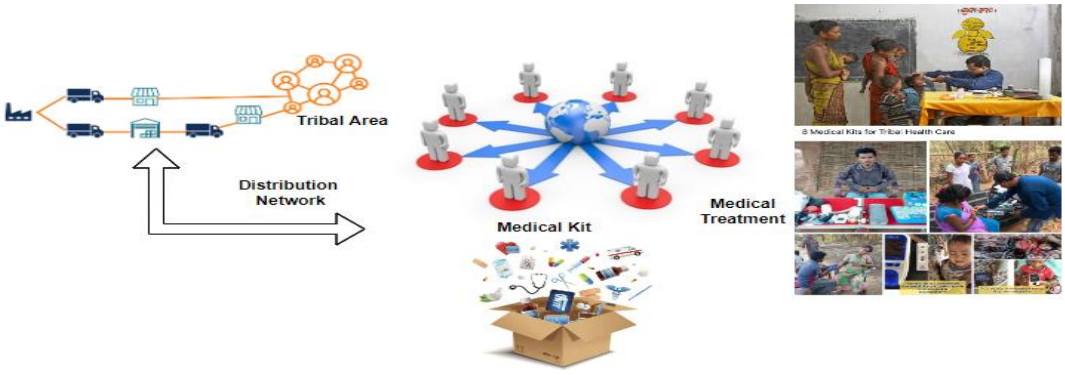


Figure: Creating distribution Network for Nearby Patient care

3. Tribal patient body text identification using Sentimental analysis

It's simple to identify tribal patients. Sentiment analysis is a method of natural language processing (NLP) for determining the underlying emotional tone of a piece of text. This method is often used by organisations to collect and organise data on tribe members' perspectives on health-related concerns. No big deal if a negative is found in this sort of emotional evaluation. If the result is positive, you will require immediate access to medical services. As a result, the hybrid system is prepared to monitor and deliver medical supplies to a patient who tests positive, which is of great use to indigenous peoples seeking prompt medical attention.

Input: Image FileT, the sentimental J
Output: S_{mt} = {Pv,Nv, or N} and Strength S, Where Pv, Positive, Nv: Negative, N: Neutral
Initialization: SumPos and SumNeg=0, Where
SumPos: Accumulates the polarity of positive tokens $t_{i\text{-}smt}$ in T
SumNeg: Accumalates the polarity of negative tokens $t_{i\text{-}smt}$ in T
Start
    For each t_i ε T do
        Search for t_i in J
        If t_i ε Pos-list them
         SumPos← SumPos+ $t_{i\text{-}smt}$
        Else if t_i ε Neg-list them
         SumNeg←SumNeg + $t_{i\text{-}smt}$
        End if
End for
If SumPos>[SumNeg] them
S_{mt} = Pv
S = SumPos/(SumPos+SumNeg)
Else if SumPos<[SumNeg] them
S_{mt} = Nv
S = SumNeg/(SemPos+SumNeg)
Else
S_{mt} = N
S = SumPos/(SumPos+SumNeg)
End if
End

4. Tribal patient tracking system and nearby patient care

IoT's proliferation of connected devices has made RFID an indispensable asset for any company with a significant investment in the medical sector's health care infrastructure. Connecting tangible assets to data collection techniques like Asset Tracking Software has had revolutionary effects, from airline baggage tracking to retail store security. When patients in remote areas have medical emergencies, having access to accurate data on their whereabouts might mean the difference between life and death. When caring for a tribal patient, the following technologies come into play, especially when setting up a distribution network to get medical kits to local caretakers, who would then make sure the patient stays healthy and well.

Stage 1: Tribal use RFID

Stage 2: Easily Tracking Tribal Patient and give timely medical treatment

Stage 3: medical kit for tribal patient based on Distribution network

Stage 4: Timely getting treatment

Figure: Tribal patient tracking system and nearby patient care

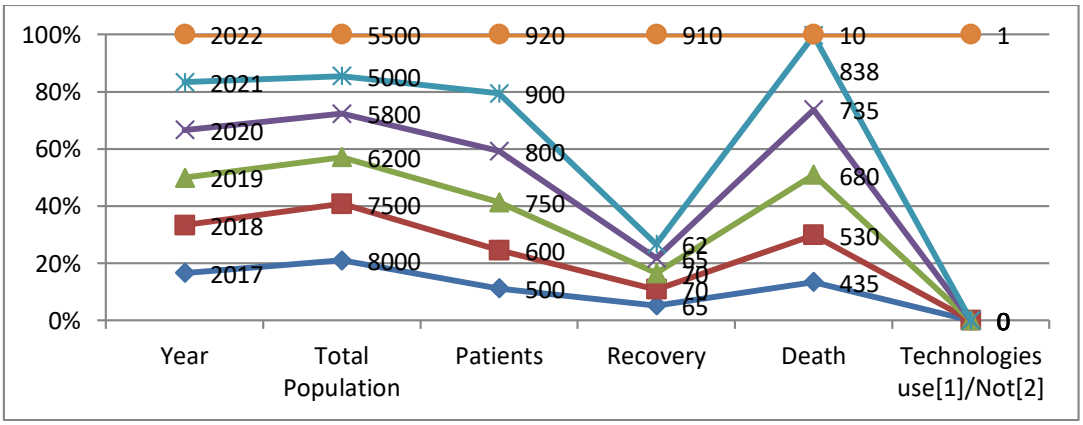
5. Experimental results

The goal of the experiment is to find out how well a tribe's health care works. Protecting Tribal Peoples near Patient Care Centres as an Example Use a Hybrid Technique Based on a distribution network is hard to evaluate based on a single parameter because there are many parameters that control the performance of the distribution network and the patient care system environment. The evaluation starts with keeping track of the tribal patients, which helps us decide how many patients to reserve per place and how long the experiments will last. Reduce the

number of medical and health problems as much as you can. When we use these hybrid technologies, they make a big difference in tribal areas. These technologies use binary classification, where 0 means without technology and 1 means with technology. Without technology, they have a lot of problems with medicine, transportation, and other things, and the death rate goes up. With technology, all of the health care problems of tribal people can be solved, and this will make the environment healthier every day. Here 0 meaning more tribal patient injected medical problem but their don't have use any other technologies so missing in-time medical treatment so that gradually reduce tribal population and increasing tribal patient death rate and class 1 meaning is using hybrid technology this one is very useful for tribal patient's easily getting in time medical treatment so, first track the patient and protect the tribal area in nearby patient care based on distribution network. This hybrid technologies day to day performance improving and getting health environment to tribal area so gradually improve tribal population and also reduce missing in time medical related issues for tribal peoples.

Table2: Protecting Tribal Peoples nearby Patient Care Centres Use a Hybrid Techniques Based on a Distribution Network

Year	Total Population	Patients	Recovery	Death	Technologies use[1]/Not[0]
2017	8000	500	65	435	0
2018	7500	600	70	530	0
2019	6200	750	70	680	0
2020	5800	800	65	735	0
2021	5000	900	62	838	0
2022	5500	920	910	10	1



6. Conclusion

In this paper, we suggest using a hybrid method based on a distribution network to protect tribal people who live near patient care centres. In this paper, we'll look at how the health care system can help solve problems with tribal medicine and patient care. In this work, we use a distribution network to apply some performance techniques for tribal health care for patients close by. These simple changes to how well tribal people in good health do their jobs will make a big difference in how fast they can respond. In the future, improve the performance of more graphic views and reduce the number of undeveloped tribal areas and transportation that are hard to get to.

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