

Wheather Forecast Using Andriod

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Abstract- *Weather forecasting is a very important application in meteorology and has been one among the most scientifically and technologically challenging problems around the world. During this paper, we tend to investigate the use of information mining techniques in forecasting maximum temperature, rainfall, evaporation and wind speed. Weather prediction approaches are challenged by complex weather phenomena with limited observations and past information. Weather phenomena have several parameters that are} not possible to enumerate and measure. Increasing development on communication systems enabled forecast expert systems to integrate and share resources and therefore hybrid system has emerged. Even though these improvements on forecast, these expert systems cannot be fully reliable since forecast is main problem.*

Keywords- Weather change information, internet, Single platform.

I. INTRODUCTION

Rapid and abrupt climate changes have remarkably increased the importance of a weather app. Today, weather apps will give correct forecasts to alter users to make informed decisions. Integration of advanced features and technological progress it'll make an easy to know the sudden changes in the climatic conditions beside real-time alerts.

Since ages, humans want to know regarding climatic conditions in advance. Within the current age of the internet and mobility, weather apps make it possible to predict climatic conditions on the move. Summing up, weather mobile app with necessary features will make the users prepared for any weather-related challenges.

Weather alert or forecast mobile apps are not simply to do the forecasting, however offer other crucial features as well. Like, there are apps that show climate & nature change on the world for a specific time period or perhaps gives the current weather information. However, the forecast function is used the most. But, then the other features also enjoy its niche audience.

Motivation

Basic motivation behind this project gives higher protection to the people from the sudden weather change that may harm living things. Warn human being of weather change so they can take action to protect lives.

Problem Statement

As every scientist believes, that subsequent atmospheric states develop from the preceding ones according to physical law, then it's apparent that the required and sufficient conditions for the rational solution of forecasting problems are the following:

1. A sufficiently accurate data of the state of the atmosphere at the initial time.
2. A sufficiently accurate data of the laws according to which one state of the atmosphere develops from another.

II. LITERATURE REVIEW

1. (Sivakumar 2001; Sivakumar et al. 1999; Men et al. 2004). At present, the valuation of the nature and causes of seasonal climate variability remains formation. Since, it's a complicated phenomenon that includes several specialized fields of know-how to work for weather prediction (Guhathakurata, 2006); thus, in the field of meteorology all assumptions are to be taken within the visage of uncertainty connected with local of and global climatically variables. Different scientists over the world have developed stochastic weather models. It's mainly wont to predict and warn about how natural disasters that are caused by abrupt modification in climate conditions and has been approached using climatic means
2. Seyed, A., Shamsnia, M., Naeem,S. and Ali, L.,(2011) was explained that the modeled weather parameter using some of the random methods(ARIMA Model) it include the Case Study:Abadeh station,Iran. Mahsin et al. (2012) used Box-Jenkins methodology to form seasonal ARIMA model for monthly weather information taken for Dhaka

station, Bangladesh, for the significant amount from 1981-2010.

3. In the paper, ARIMA model was found suitable and also the model is working for prediction the monthly climate prediction. sea University, vocational school of Technical Sciences, Turkey(2010) comparative study of statistical and neuro-fuzzy network models for forecasting the weather of Göztepe, İstanbul, Turkey adaptive Network based Fuzzy inference System and auto Regressive Moving Average models are applied that ensure the efficiency of ARIMA and ANFIS techniques, models using a different training and test data set are tested and also the criteria of performance evaluation that are calculated for estimating so comparing the performances of ARIMA and ANFIS models for forecasting has mentioned the clear review
4. Mahmudur Rahman, A.H.M. Saiful Islam, Sahah Yaser Maqnoon Nadvi , Rashedur M Rahman (2013) consider Arima and Anfis Model and explained how ARIMA Model will a lot of efficiently capture the dynamic behavior of the weather property , say, Minimum Temperature , most Temperature, humidity and air pressure that must be compared by different performance metrics, for example, with Root Mean square Error (RMSE), R-Square Error and also the sum of the square Error(SSE) and author can prove that ARIMA would offer the a lot of efficient result than other modeling techniques like ANFIS.

Objective

- a) App gives instant news of weather without any delay.
- b) Makes buzzer when you're nearby going have sudden weather change
- c) It's directly connected to the forecast main office.
- d) can also read daily news.

Scope of work

The weather channel: temperature, wind, air sunshine, humidity, dew point, precipitation, visibility, atmosphere pressure, water, sunrise sunset, storm, stormshield, rain alert in one wetter app.

- a) Hourly or daily prediction: we offer seven days information, the weather currently, hourly weather free in each hour, today's weather, tomorrow's weather.
- b) World weather report: we provide worldwide forecast.

- c) No GPS: not a problem, app will detect network location, not therefore accurate but its ok for some cases
- d) Storm warning & notification: Storm radar, storm huntsman, tornado warning and rain alarm - rain radar
- e) Reporting: the weather news will show up every day if you enable it.

III. REQUIREMENTS

Hardware Requirements:-

1. android mobile with a minimum version 2.2.
2. The processor isn't less than 500MHZ.
3. RAM > 170mb.
4. SD card with a minimum of 512 MB.
5. Resolution isn't less than 480*800pixs.

Software Requirements:-

1. android Studio.
2. Firebase

Proposed Work,

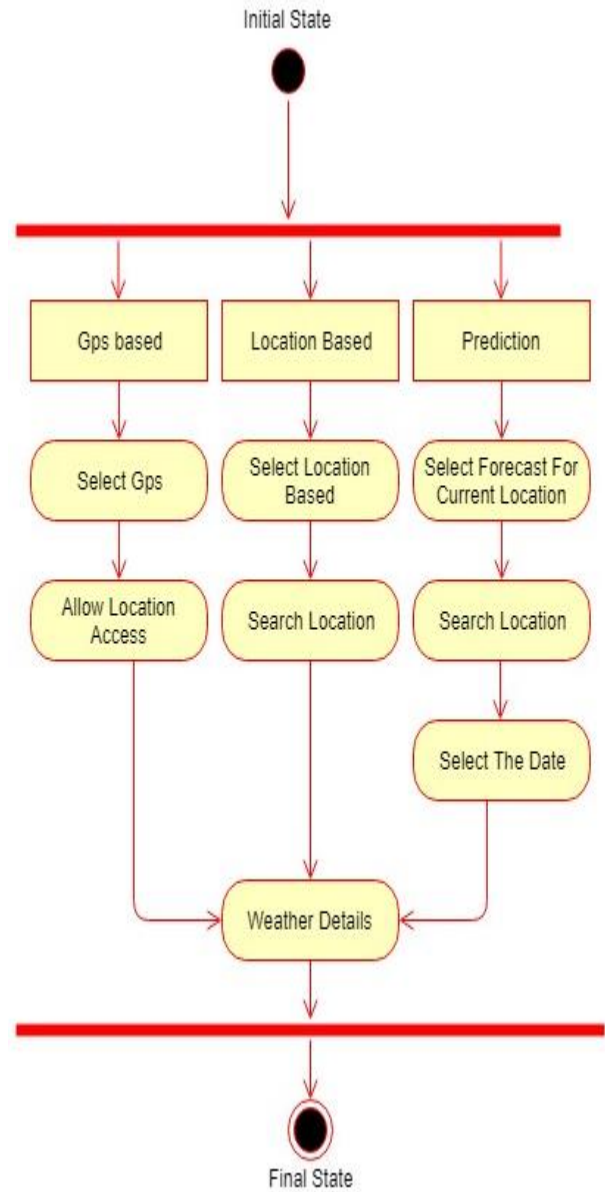
1. we can check the weather reports through our proposed system.
2. We can check the weather at other places through our proposed system.
3. This system is portable (easy to use).

Modules

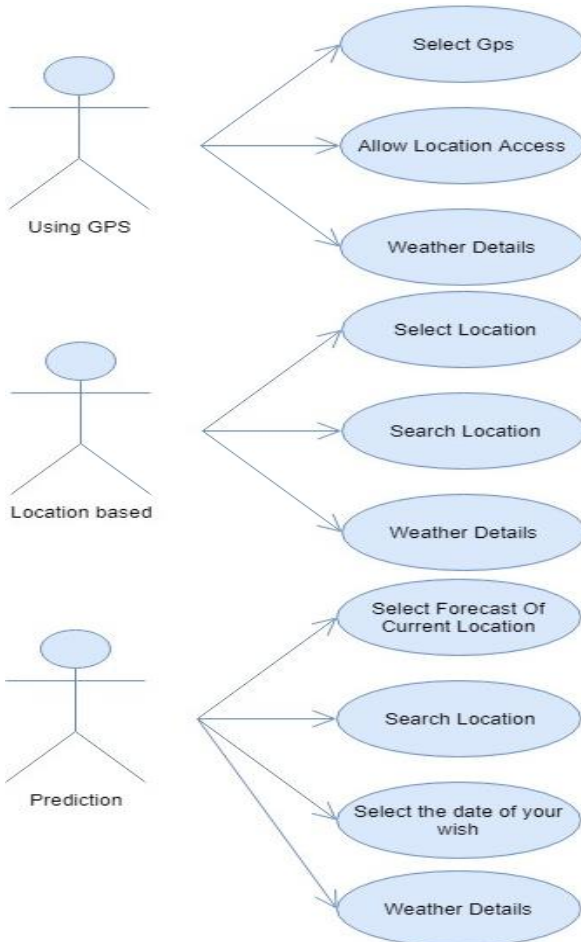
- a) Weather conditions information: though it should not be the most accurate way to collect weather data, still many countries use it. the concept here is to try and do the forecasting based on the continuous statistical information of two-three decades. Certainly, not the most advanced way to forecast weather, however proves useful in nations lacking weather satellites & cameras.
- b) Satellites: it is the most accurate way for weather forecasting and helps in receiving the most accurate prognosis.
- c) Doppler Radar: again, one of the most accurate ways. This technology works with short radio waves known as pulses' that have high-transmission & dual-polarization. Thus, Doppler radar, using a two-dimensional image, is able to predict rain, ice pellets, snow with high-accuracy.

- d) Camera: Another best way to forecast weather is thru the use of cameras and a few apps do it already. the mix of satellite, cameras & radars offers better results.
- e) National Weather Service data: within the us, weather apps use NWS information. Well NWS will a great job of collecting information from metro stations & satellites across the nation and makes a forecast with a special computer algorithm. However, this again isn't the most accurate way.
- f) Smartphone functionality: weather forecast may be finished the use of smartphone sensors, like accelerometer, gyroscope, barometer, battery temperature, etc. This method basically allows forecasting only for this location and isn't that accurate.
- g) Now, these are some of the wonderful ways in which to gather weather information, however, not all of them offer accurate data. In fact, the best & most accurate climate data from across the world is gathered by satellites.

Flowchart



IV. SYSTEM MODEL



V. CONCLUSION

The present study is a contribution towards tracking the changing nature of verbal and visual communication of weather forecasts related to the proliferation of smartphone and mobile computing devices as means of dissemination. Most importantly, the task was to identify current limits in order to gain potential benefits. The current and future advantages from revolutions in mobile communication technologies are clear, not only for emergency weather situations, but also for ordinary forecast dissemination. However, a few elements arising from this analysis of weather apps should be considered carefully, because they seem to accustom users to expectations beyond current forecasting capabilities.

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