

WEATHER FORECAST

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ABSTRACT

The communication has become a part and parcel of every human's life. Now-a-days the world has become a very small place to live in and get in touch with people due to the technologies and the social networking sites. The intention is to develop a "Weather Forecast" which works like Google weather and other apps. Since the existing applications which are present only for providing the current weather but not the forecast. They don't provide any pictorial representation The development of the user friendly application exploited using the Android platform. Android is an open-source software stack created for mobile phones and other devices and is built on top of Linux kernel and GNU software.

Keyword : - Weather1, Forecast2, Temperature3, Humidity4 and Pressure5 .

1. INTRODUCTION

Today's an ICT innovation towards weather is more prominent part for visitors Weather forecasting is the application of science and technology to predict the conditions of the atmosphere for a given location and time. Human beings have attempted to predict the weather informally for millennia and formally since the 19th century. Weather forecasts are made by collecting quantitative data about the current state of the atmosphere at a given place and using scientific understanding of atmospheric processes to project how the atmosphere will change. Once a human-only endeavor based mainly upon changes in barometric pressure, current weather conditions, and sky condition, weather forecasting now relies on computer-based models that take many atmospheric factors into account.

Human is still required to pick the best possible forecast model to base the best possible forecast model to base the forecast upon, which involves pattern recognition skills, teleconnections, knowledge of model biases. The inaccuracy of forecasting is due to the chaotic nature of the atmosphere, the massive computational power required to solve the Equations that describe the atmosphere, the error involved in measuring the initial conditions, and an incomplete understanding of atmospheric processes. Hence, forecast becomes less accurate as the difference between the current time and the time for which the forecast is being made.

2. LITERATURE SURVEY

Weather report is the application of science and technology to predict the conditions of the atmosphere for a given location and time. Human beings have attempted to predict the weather informally for millennia and formally since the 19th century. Weather forecasts are made by collecting quantitative data about the current state of the atmosphere at a given place and using scientific understanding of atmospheric processes to project how the atmosphere will change.

Once a human-only endeavor based mainly upon changes in barometric pressure, current weather conditions, and sky condition, weather forecasting now relies on computer-based models that take many atmospheric factors into account. Human input is still required to pick the best possible forecast model to base the forecast upon, which

involves pattern recognition skills, teleconnections, knowledge of model performance, and knowledge of model biases. The inaccuracy of forecasting is due to the chaotic nature of the atmosphere, the massive computational power required to solve the equations that describe the atmosphere, the error involved in measuring the initial conditions, and an incomplete understanding of atmospheric processes. Hence, forecasts become less accurate as the difference between current time and the time for which the forecast is being made (the range of the forecast) increases. The use of ensembles and model consensus help narrow the error and pick the most likely outcome.

3. EXISTING SYSTEM

There are some existing systems available but they don't give an accurate results and doesn't provide any pictorial representation. They don't provide information about weather conditions, humidity, pressure but just display the temperature. Some of the existing systems don't provide the forecast weather which may not help the users to plan their works and may lead to futile results

4. PROPOSED SYSTEM

In proposed system, we have two different screens. First screen is used for providing information about the current weather and second screen is for Forecast weather. Based on requirement we will be using this system through a mobile phone i.e. an android phone.

The first screen displays our exact location, date, time. It predicts the temperature, pressure, humidity and displays in pictorial form.

The second screen displays the weather forecast and provides information about atmospheric conditions for next 5 days. Which will help all the people to work according to climate conditions and get a fruitful result.

We are working on to get the data from government organizations. So that whatever information we provide, will be more accurate than existing systems.

5. SYSTEM ARCHITECTURE

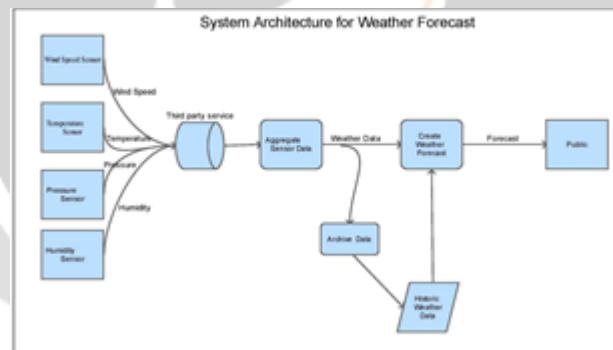


Fig-1: System Architecture

In this System architecture, there are various blocks that described as follows:-

A. Wind Speed Sensor

This sensor is used for detecting the speed of the wind and provides information about the conditions of cloud and wind speed

B. Temperature Sensor

This Sensor is used for providing the information about temperature. It provides atmospheric conditions

C. Pressure Sensor

This sensor is used for measuring the pressure of liquid and gases. It generally acts as a transducer, it generates a signal as function of the pressure imposed

D. Humidity Sensor

This sensor is used for measuring relative humidity of air. It therefore measures both moisture and air

temperature.

E. Third party service

Using the API or plug-in which are available, we can work on showing the weather information accurately.

F. Aggregate Sensor Data

This is used for gathering the information provided by the above sensors and express them in a summary form for a statistical analysis.

G. Archive Data

It acts like storage device for long term retention. It consist of previous data that may helpful for the organization for future reference.

H. Historic Weather Data

It acts like a secondary storage. It can be helpful for the organization to predict the future atmospheric conditions as when conducting predictive analyses.

I. Create Weather Forecast

This is the last stage of the proposed system where we finally provide accurate data to the public in the form of android app.

6. CONCLUSIONS

So by implementing our system, it is beneficial to accessing the weather information quickly in an easy way through an android application. Proposed system avoids the language barrier using various intercommunication strategies. This system includes the Forecast details of intended Traveler. It also provides weather conditions like Humidity and Pressure. For implementing this system it is research work in documentation phase-I and still we are working on implementation system in phase-II.

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