**PROJECT EXPLANATION : WEATHER PREDICTION**

The [weather](https://goweatherforecast.com/) has a great impact on various aspects of human life. So, efforts have been made for years to improve the accuracy of weather prediction to ensure a better life. In this article, we’re going to learn about the key importance of weather prediction

What is weather prediction?

Weather prediction refers to the process in which science and technology are applied to predict the conditions of the atmosphere for a given location and time. Humans have been making an unofficial weather prediction attempt millennia ago, and official weather prediction dates back to the nineteenth century. Weather prediction is done by collecting data on the current state of the atmosphere and applying a scientific understanding of atmospheric processes to predict atmospheric progression.

## **Key Importance of weather prediction**

The ultimate goal of weather prediction is to protect human lives and property, improve health, safety, and economic prosperity.

Weather prediction positively impacts people's lives in various ways:

### #1. Weather prediction benefits tourism

No doubt, tourism is strongly affected by climate and weather. The increasing fluctuations of weather may affect tourists and tourism businesses. Thus, weather prediction helps in planning tourism facilities to minimize the damage caused by severe weather, as well as increase profitability. In particular, by checking the weather forecasts, tourists are able to choose proper destinations for the best experience, plan their trips to avoid possible risks.

### #2. Weather prediction improves transportation safety

Weather strongly impacts the safety and operation of roads. Driving abilities can be impaired by severe weather conditions like snow, rain, or storm. Moreover, There has been a slew of traffic accidents reportedly caused by bad weather.

For air transportation, weather forecasters help reduce flight delays, flight times, and energy savings, and ensure the safety and comfort of passengers. The key importance of weather prediction for this industry is the provided information on critical weather conditions that could endanger an aircraft at takeoff, landing, and during flight, e.g. strong winds, thunderstorms, tornadoes, and ice.

Marine meteorologists prepare advisory information for ships, including information on the position, trajectory, and intensity of strong storms and warnings of strong winds, fog, and hazards. other risks, as well as general forecasts about weather and sea conditions. Vessels may accordingly change course to avoid adverse weather conditions. As a result, the safety of ships, cargo and passengers is enhanced, and fuel is saved at the same time.

### #3. Weather prediction beneficial to dressing

It’s true that weather affects how we choose outfits. It’s not easy to dress well in unusual weather conditions, though your wardrobe is filled with multiple items.

For example, you have an outdoor meeting tomorrow but you don’t know how to dress properly. That’s where weather forecasts come in handy.

By checking whether, before the event, you can get an overview of how the weather would look like to choose the best clothing without being affected by the weather.

This helps save your time and solves the headache matter of what to wear.

### **#4. Weather prediction is beneficial to farmers**

Temperature, humidity, and precipitation play an important role in the cultivation of fruits and vegetables.

Farmers previously predicted the weather based on observations of the sky. However, the development of meteorology these days has provided them with accurate weather forecasts by using supercomputers to collect data.

By regularly checking weather forecasts, farmers are able to know the best time for crops and farming practices and better understand and track the growth status to make potentially costly decisions.

The importance of weather prediction for precision agriculture is obvious.

### #5. Weather prediction enables planning properly

One of the most noticeable benefits of weather prediction is to make proper plans. Checking weather forecasts online before the trip or before you join outdoor activities to know what the weather is going to be like and to have a good preparation.

### #6. Weather prediction & forestry

Weather prediction is crucial for preventing and controlling wildfires.

Various indicators, such as the Forest Fire Weather Index and the Haines Index, have been developed to predict areas prone to fire caused by natural or human. Growth conditions for insects can also be predicted by prediction the course of the weather.

### #7. Weather prediction & utility companies

Thanks to weather forecasts, electricity and gas companies can predict demand that is strongly affected by the weather.

They used the quantity known as the degree day to determine how much use would be available for heating (heating degree day) or cooling (cooling degree day). These quantities are based on an average daily temperature of 65 ° F (18 ° C).

Extreme cold weather in winter can cause demand to skyrocket as people have to increase heating. Likewise, in the summer, the soaring demand may be related to the increased use of air conditioning systems in hot weather. By anticipating soaring demand, utilities can buy more energy or natural gas supplies before prices rise, or in some cases, limited supply through use. electronics stores and power outages.