
Modern Engineering Challenge In Predicting The Weather

Introduction

“Weather” is defined as the the condition of the atmosphere at a specific space and time as regards heat, dryness, wind, rain, etc. over a short time frame, whereas “climate” refers to the weather data of a place over a longer period to yield meaningful averages.”Global Change” means alterations in the Earth.

A Brief History

Man has always aspired to predict about the weather conditions. In the past, astrologers studied stars and dreams to predict weather and much more. It is mentioned in the Holy Qur’an that Hazrat Yusuf (S.A.W.) predicted the dream to save Egypt from famine. In a nutshell, prediction about weather, climate and global change grew more and more in the respect of science over the course of time.

Daily Life Affects

The weather affects all of us as an unexpected rain can ruin a picnic and snowfalls can block road. Fine weather across the farmlands produce heavy yield but the weather does not only affect the yield but also an abundant yield can make food cheaper and vice-versa. Mild weather conditions can lower our utility bills like gas, water and electricity.

Significance of Prediction

It is crucial to know about the weather after a few hours in some cases. Fishermen and sailors must when it will be safe for them in the sea. Similarly, Pilots must know the wind velocity for a safer travel. Climate change is inevitable, but today, it is noticed that this change is taking place quite faster compared to the past due to increment of human activity in the natural system so we are more concerned about the environment than our ancestors. Thus, we look at the ways of how the environment works with a powerful scientific approach.

Challenges

When considering all the climate statistics we are always challenged by a certain amount of uncertainty. This uncertainty comes mainly from the huge lack of data. We cannot know the changes in the weather i.e. heat, wind speed, etc. at every instant of time so we take an average of all the values but this approximation changes the forecast. This is coupled by the fact that there is a serious lack of knowledge which makes the data vulnerable. Engineers are challenged to make a computing system which can overcome these problems. Better satellites should be employed for the computation of data. Another challenge is of monetary respect. Low-Budget investment in this sector impedes in the way of development.

Discussion

Prediction about climate change is a huge task at hand. We should collaborate both nationally and internationally to deal with the problems regarding it. Moreover, a general awareness should be given to the local people through seminars and media so change can be made for the better.

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