**Title:** Predictive Analysis of Climate Change of Pakistan

**Introduction:** Climate change refers to changes in the Earth’s climates, at local, regional, or global scales, and can also refer to the effects of these change. As it can be seen in the past 100 years, the world's surface air temperature increases gradually due to burning fossil fuels that releases carbon dioxide and other greenhouse gases into the atmosphere. PACC models will predict the change in Earth’s climate and its effect on the environment Pakistan.

**Objectives:** The objective of this project is to asses climate change factors and further predict how these factors will change in the future effecting the climate. In this project different models are being used to predict the climate changing factors. Furthermore using these predictions to accurately predict global climate change and its effects on the environment of Pakistan.

**Methodology:** Our system will be processing the variety of data observed in playing its role in climate change. We will process different datasets, we will further train models for each factor effecting climate change. Our systems would be tested for efficiency & accuracy in-order to find prediction pattern for the near future. Once we have the predictive analysis of those factors, the predicted data will be used to integrate all the factors into one main predictive analysis model that will provide the overall analysis in change of climate over the years and the prediction for the future.

First step of the project would be data collection, after collection data needs to be processed due to which data goes through several steps usually known as data processing cycle. Below are the steps included in data processing cycle.

**Project Scope:** During the next few decades and beyond, global warming is expected to cause further increases in atmospheric moisture content, more extreme heatwaves, fewer frosts, further decreases in the extent and thickness of sea ice, further melting of mountain glaciers and ice sheets, shifts in rainfall, ocean warming and rises in sea levels. The magnitude of expected change depends on future greenhouse gas emissions and climate feedbacks.

As we know Climate change not only leads to extreme weather events and dangerous health effects the world over, but, as a threat multiplier, it poses a direct risk to human survival for many of the world’s most vulnerable communities.

In this project we examine and assess the patterns of change in these conditions and the magnitude of their effects on the global climate. We proposed a system which provide the overall analysis in change of climate over the years and the prediction for the future. We believe that mitigating climate change is not only important for global peace and security, but key to fulfilling our moral imperative to protect those communities most at risk. Our work is time sensitive and urgent.

This system would be used to predict the climate change over the years and its effects on the environment and the world. These predictions would be used to take precautions in-order to mitigate climate change and further preserve the environment.