INFM600

Group 5 Wolfpack-ZEL

Project Proposal

# **Climate Change Proposal**

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# **Project Overview**

Human factors are the current number 1 causes for global warming, especially due to carbon pollution through the burning of fossil fuels. Through the study and understanding of data, we are able to draw conclusions based on science. How much of a threat is global warming, and what are the underlying patterns that we can observe from this data?

Through our project, we plan to merge the data from 5 different datasets having global temperature data along with the timestamp for past 265 years. We will analyze the data to find out how temperature, location and time are related and create a dashboard to enable the visualization of these trends and patterns for the users.

**Project Methodology**

The statistical analysis approach is used. This approach allows the analysis of co-relation between temperature and location. Quantitative methods will be used in the datasets. Data for global temperatures, cities, states, major cities and countries was available in 5 different datasets. These data sets will be merged and preprocessed.

**Project Goals**

The goals of the project are to:

1. Merge the data from 5 datasets to create the new dataset of global temperature and related information for past 50 years and preprocess it for analysis.
2. Analyze the data and develop a conceptual framework that would enable users to understand the relation between global temperature and climate change.
3. Create a dashboard to enable the visualization of the trends and patterns for the global temperature.

**Project Scope**

There are 5 datasets in this package that could be merged together to answer the following questions:

1. What is the average temperature of each country over the past 40 years?
2. Which countries experience the highest temperature degree over the past 40 years?
3. What are the temperature trends in the major cities?
4. How the latitudes and longitudes of the countries affect their climate change?

**Limitations**

The assessment of the climate change due to the global temperature is a complex task due to following reasons:

1. The large spatial scale (i.e. local, national or global)
2. The different component involved in climate change other than global temperature
3. The different geological and sociological conditions which affected the involved data
4. The large temporal scale (i.e. 265 years)

**Deliverables**

The deliverable will be a power point presentation. This presentation will include the process of data cleaning, analysis, methodology used, problems faced during analysis and the final result. All the materials related to the research and analysis will be included in GitHub repository.

# **Project Plan**

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| **Task** | | **Projected Completion Date** |
| Planning and Pre-Processing | | 10/02/2019 |
| Submit project proposal | | 10/03/2019 |
| Identifying the problems in dataset | | 10/10/2019 |
| Solutions for the problem in the dataset | | 10/17/2019 |
| Cleaning and Pre-processing the dataset | | 10/24/2019 |
| Analyzing the data |  | 11/07/2019 |
| Implication of findings to the stakeholders | | 11/14/2019 |
| Discussion of the answers to questions raised by the dataset | | 11/21/2019 |
| Presentation | | 12/05/2019 |