Analysis of Global Temperature Rise
Project Plan

Version 1.0

Revision History

Date	Version	Description	Author
12/11/2022	1.0	Initial Plan	Kuldip Patel

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1. Introduction

1.1 Purpose of this document

The purpose of this document is to provide a detailed project description of the application called Analysis of Global Temperature Rise, which is designed to help analyze contributor parameters for the temperature rise and global warming, trends which causing it and speculate what can happen if we do/don't stop it from happening.

1.2 Intended Audience

This document shall be used in all phases of the project as a guideline. Intended audiences of this project are all project stakeholders:

- project supervisor
- project leader

1.3 Scope

This document defines the project plan of the Analysis of Global Temperature Rise application. The overview includes objectives of the project, development process that is going to be used during the project, assessment of possible risks, communication used between project stakeholders and project plan that includes time schedule and activity plan.

1.4 Definitions and acronyms

1.4.1 Definitions

Keyword	Definitions
Analysis of Global Temperature Rise	The name of the project
Project Supervisor	A person in charge of supervising the project
Project Leader	A person in charge of organizing the team and communicating with the project supervisor
Team Member	An active member of the team responsible for making the job done
Milestone	A time in a project that marks the end of a project phase or the completion of an important deliverable.
Git	Version control system that will be used in this project
Global Warming	The long-term warming of the planet, primarily caused by the increasing levels of greenhouse gases in the atmosphere.
Greenhouse gases	Gases in the Earth's atmosphere that trap heat and cause the greenhouse effect, leading to global warming. Examples include carbon dioxide, methane, and water vapor.
Climate Change	The long-term shift in weather patterns and the overall climate of a region or the Earth as a whole. It can be caused by natural factors, but is largely driven by human activities such as the burning of fossil fuels and deforestation.
Carbon Footprint	The total amount of greenhouse gases, primarily carbon dioxide,

	emitted by an individual, organization, or activity. It is often used as a measure of the environmental impact of a person or organization.
Adaptation	Actions taken to prepare for and respond to the impacts of climate change. Examples include building infrastructure to withstand extreme weather events and developing drought-resistant crops.
Product owner	Responsible for product management and its quality

1.4.2 Acronyms and abbreviations

Acronym or abbreviation	Definitions
AGTR	Average Global Temperature Rise
PS	Project Supervisor
PL	Project Leader
TM	Team Member
VCS	Version Control System
PO	Project Owner

2. Background and Objectives

The ongoing problem of climate change and the increase in the world's average temperature serve as the project's backdrop. One of the most pressing issues facing the world today is climate change, with the increase in the average global temperature serving as one of the most important indicators of this change. This project's data, which came from NASA's GISS Surface Temperature Analysis, will enable a thorough examination of the rise in the world's average temperature over time. The project will also investigate possible causes of this increase, such as CO2 emissions and the human development index, using information from Climate Watch and UNDP. By providing a clear and intuitive visual representation of the data, this project aims to shed light on this important issue and help inform efforts to address climate change.

This project's goal is to examine potential causes of the rise in global average temperature, such as CO2 emissions and the human development index. It does this by using data from NASA's GISS Surface Temperature Analysis. In order to better understand the trends and correlations in the data, the project aims to provide a simple and understandable visual representation of the data. Tableau, a potent tool for data visualization that enables the creation of interactive and dynamic visualizations, will be used to analyze the data. To provide a thorough analysis of the rise in the global average temperature and its potential causes, the project will use data from NASA, Climate Watch, and UNDP.

3. Organization

3.1 Project group

Name	Initials	Responsibility (roles)
Kuldip Patel	KP	Project Development

3.2 Customer

The target customers are listed below:

- 1 Governments
- 2 Environment NGOs
- 3 Industries
- 4 General Public

4. Development process

The project will use Tableau and Python with Pandas to process and visualize the data from the sources. The first step in the development process will be to obtain the data from NASA's GISS Surface Temperature Analysis, Climate Watch, and UNDP. This data will be cleaned and processed using Python with Pandas to prepare it for visualization in Tableau. Next, the processed data will be imported into Tableau, where it will be visualized using various chart and graph types to provide an intuitive and dynamic representation of the data. The visualizations will be designed to highlight key trends and correlations in the data, allowing for a better understanding of the rise in global average temperature and its potential causes. Finally, the visualizations will be shared and discussed to provide insights and help inform efforts to address climate change.

5. Deliverables

To	Output	Planned week	Promised week	Late +/-	Delivered week	Notes
10/18/22	Data Collection	**1**				
10/25/22	Data Cleaning	**2**				
11/8/22	Data Processing	**2**				
11/22/22	Visualization	**2**				
12/6/22	Presentation	**1**				
12/13/22	Report	**1**				

6. Project risks

Possibility	Risk	Preventive action

Data quality	The data used in the project may be incomplete, inaccurate, or outdated, leading to incorrect or misleading results	Verify the data sources and ensure that the data is complete, accurate, and up-to-date
Data processing	Errors or issues may arise during the cleaning and processing of the data using Python with Pandas, leading to incorrect or inconsistent results	Thoroughly test the data processing steps and validate the results to ensure accuracy and consistency
Visualization	The visualizations created using Tableau may be difficult to interpret or may not effectively convey the insights from the data, leading to confusion or misinterpretation	Design the visualizations carefully, using appropriate chart and graph types, and test them with different audiences to ensure clarity and effectiveness
Tool limitations	The capabilities of Tableau and Python with Pandas may not be sufficient to effectively visualize and analyze the data, leading to limitations in the results and insights	Research and evaluate alternative tools, and consider collaborating with other experts or organizations with relevant expertise and resources

7. Communication

7.1 Collaboration

Collaboration is an essential aspect of this project, as it involves working with multiple stakeholders and experts to analyze and visualize the data on the rise in global average temperature. By fostering collaboration and communication, the project can benefit from a diverse range of expertise and perspectives, leading to more comprehensive and impactful results. This can include collaborating with climate change experts and organizations to provide valuable input on the data and its implications, as well as potential actions to address the issue. In addition, collaborating with data visualization experts can provide guidance on the best practices and techniques for creating effective and intuitive visualizations. Through collaboration, the project can help inform efforts to address climate change and promote a better understanding of this important issue.

7.2 Git

All source code and finished documentation will be uploaded to GitHub repository.

Repository URL: https://github.com/kp7742/Data230-Project

8. Project plan

8.1 Time schedule

Id	Milestone Description	Responsible Dept./Initials	Plan	Finished week	Forecast Week (+/-)	Actual	Metr.	Rem.
1	Data Collection	KP	10/18/22	1				
2	Data Cleaning	KP	10/25/22	2				
3	Data Processing	KP	11/8/22	2				
4	Visualization	KP	11/22/22	2				
5	Presentation	KP	12/6/22	1				
6	Report	KP	12/13/22	1				

8.2 Remarks

Remark Id	Description
N/A	N/A

9. References

1. NASA's GISS Surface Temperature Analysis Data: https://data.giss.nasa.gov/gistemp/
2. Climate Watch's CO2 Emission Sector Level Data: https://www.climatewatchdata.org/data-explorer/historical-emissions
3. UNDP's Human Development Index Data: https://www.climatewatchdata.org/data-explorer/historical-emissions
4. Tableau: https://www.tableau.com/
5. Pandas documentation: https://pandas.pydata.org/
6. "Global Warming of 1.5°C" report by the Intergovernmental Panel on Climate Change: https://www.ipcc.ch/sr15/
7. NASA's Global Climate Change website: https://climate.nasa.gov/