**Road map of the project 3**

1. **Introduction**

* Brief overview of the project's goals and objectives.
* Importance of understanding weather-related risks in various sectors.

1. **Data Collection and Preprocessing**

* Identify sources of weather …
* Gather historical weather data relevant to agriculture, insurance, health, and transportation.
* Preprocess the data (cleaning, formatting, etc.) for analysis

1. **Data Exploration and Analysis**

* Perform exploratory data analysis (EDA) to understand patterns and trends in weather data.
* Analyze weather-related risks and their impact on agriculture (crop yields, pests/diseases), insurance (claims frequency/severity), health (disease outbreaks, air quality), and transportation (road conditions, accidents).
* Identify correlations between weather variables and risk indicators.

1. **Data Visualization**

* Use one of the databases like; (SQL, MongoDB, SQLite, etc.)
* Create visualizations (charts, graphs, maps) to illustrate weather patterns, risk factors, and their impact on different sectors.
* Use interactive visualizations where applicable to enhance understanding.

1. **Risk Minimization Strategies**

Based on analysis and insights, propose strategies for minimizing weather-related risks in each sector.

* Agriculture: Crop diversification, precision farming, weather-resistant crops.
* Insurance: Risk-based pricing, hedging strategies, improved modeling.
* Health: Early warning systems for disease outbreaks, air quality monitoring.
* Transportation: Road maintenance schedules, weather-informed route planning, vehicle safety measures.

1. **Recommendations and Conclusions**

* Summarize key findings and recommendations for risk minimization.
* Highlight potential benefits of implementing suggested strategies.
* Discuss the limitations of the study and areas for future research.

1. **Documentation and Reporting**

* The GitHub repo has a README.md that includes the following:

1. *An overview of the project and its purpose*
2. *Instructions on how to use and interact with the project*
3. *At least one paragraph summarizing efforts for ethical considerations made in the project*
4. *References for the data source(s)*
5. *References for any code used that is not your own*

* Create a presentation summarizing the project for class BOOTCAMP.

**Data sources: for weather:**

Environment and Climate Change Canada (ECCC),

<https://climate.weather.gc.ca/>

<https://climatedata.ca/download/#station-download> direct access to data

Natural Resources Canada (NRCan)

<https://climateatlas.ca/>

Weather Network

<https://www.theweathernetwork.com/ca>

Open Data Portals

<https://open.canada.ca/en/open-data>

**Data source for agriculture:**

Agriculture and Agri-Food Canada (AAFC)

<https://biologicalcarbon.ca/information/?gad_source=1&gclid=CjwKCAjwoPOwBhAeEiwAJuXRh3MlFyuUgIhCJSZ8_HqioShLPA_9q3EnUDtzjdgSljVz4acP-x6JThoC1UcQAvD_BwE>

Statistics Canada Agriculture

<https://www.statcan.gc.ca/en/subjects-start/agriculture_and_food>

Agri-Food Analytics Lab