**Weather Impacts and Risk Minimization**

**Team Members**

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**Project Outline**

This project aims to conduct data exploration, analysis and visualisation on weather related risks and its impact in the areas such as agriculture, insurance, health, transportation/road network. Project aims to recommend potential avenues on how the risk could be minimised or avoided.

Extreme weather events can cause damage to tourism infrastructure and attractions, including hotels, resorts, beaches, historical sites, and natural landmarks. This can disrupt tourism operations and deter visitors from coming to the affected areas.

Weather extremes can have adverse effects on human health like severe heat or cold weather can create Storms and harsh conditions can cause hurricanes, floods and wildfires which end up in secondary dangers like floods, wildfires, and damage to property.

Certain extreme weather like excessive heat and cold can have major impact on agriculture and livestock production, this indirectly affect public health and also economy of the country.

## **Data Source:**

## Open-source data for the last 10 years in areas like agriculture, transport, tourism, health and weather will be explored. Open Weather Map [https://openweathermap.org/api](https://openweathermap.org/api" \t "_blank) will also be used.

**Preliminary Research Questions:**

Agriculture:

* How does the implementation of weather risk management strategies affect crop yields and overall agricultural productivity?
* What are the financial implications of utilizing weather risk management tools in agriculture, and how do they compare to the costs of potential weather-related losses?
* How do different weather events, such as droughts, floods, or extreme temperatures, impact the effectiveness of weather risk management practices in agriculture?

Health:

* In what ways can weather risk management systems improve public health outcomes during extreme weather events, such as heat waves or hurricanes?
* How does the availability of accurate weather forecasts and early warning systems influence healthcare resource allocation and emergency response planning?·
* What are the long-term health benefits of proactive weather risk management strategies, particularly in vulnerable populations or regions prone to weather-related health risks?

Transport:

* How does weather risk management impact the reliability and efficiency of transportation networks, such as airlines, railways, and roadways, during adverse weather conditions?
* What are the economic implications of weather-related disruptions on transport systems, and how can effective risk management mitigate these impacts?
* How do advancements in weather forecasting technologies and real-time data analytics enhance the resilience of transportation infrastructure to weather-related challenges?