**Project 1**

**Topic Proposal**

**Title:** URBAN AIR QUALITY AND HEALTH IMPACT

**Project Team:** Team 2 (Aswin Balaji Thippa Ramesh, Abhilasha Singh, Lixing Pan)

**Research Topic:** Our research focuses on analyzing the relationship between urban air quality and public health through an exploratory data analysis (EDA). The dataset captures key environmental factors such as temperature, humidity, wind speed, and visibility, alongside health-related metrics including severity scores and health risk scores. By exploring this data, we aim to identify patterns and correlations between air quality and health outcomes.

**SMART Question(s):**

The following questions are the main subjects which this project focuses on-

1. Analyze how air quality indicators vary across different seasons and cities.
2. Assess how trends in air quality indicators and health risk scores differ between weekdays and weekends.
3. Investigate the key meteorological factors that significantly influence health risk scores.
4. Determine the ability to predict periods of heightened health risk based on air quality and weather conditions.
5. Examine how air quality and health impacts vary across different demographic groups.

These insights could help inform public health strategies, allowing for proactive interventions during periods of poor air quality. Furthermore, the findings may assist urban planners in developing strategies to mitigate air quality risks, contributing to healthier living environments in urban areas.

**Source of Data Set(s):** The dataset is sourced from Kaggle website [Urban Air Quality and Health Impact Dataset](<https://www.kaggle.com/datasets/abdullah0a/urban-air-quality-and-health-impact-dataset>).

**Dataset Details:**The dataset used in this project comprises over 1,000 observations and includes 46 variables. These variables capture a range of environmental factors as well as health-related metrics.

**Git Hub Repository:** https://github.com/RobertLIII/DATS6101\_proj1\_team2\_S2021