

PROJECT PROPOSAL

MAST30034 FINAL PROJECT

Analysis of US Traffic Accident Severity

Team :

- Abhilash Misra (1018969),
- Yu Hui Yuan (915004),
- Yoann Li Youn Fong (1001536)

Dataset:

- [US Accidents](#): A Countrywide Traffic Accident Dataset (2016-2020)

Tasks:

1. Predict the level of severity of a specific US accident.
2. Geospatial visualisation of the US accidents likelihood
3. Statistical analysis and visualisation of data



Method:

1. Data cleansing and pre-processing
2. Feature selection and engineering
3. Predicting the level of severity of a specific US accident would involve:
 - a. Testing through collections of machine learning models
 - b. Identifying the best performing/fitting model
 - c. Implementation of the chosen model
 - d. Model feature representation, hyperparameters tuning
4. Geospatial visualisation of US accidents likelihood would involve:
 - a. Testing through collections of statistical models in accident likelihood prediction
 - b. Selecting the most statistically significant model
 - c. Normalise predicted accident likelihoods
 - d. Geospatial visualisation of predicted likelihoods
5. Descriptive statistics analysis, data visualisation and model evaluation