ACCIDENT SEVERITY PREDICTION USING MACHINE LEARNING ALGORITHMS

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OBJECTIVE

Traffic Accidents are the severe concern for most of the countries throughout the world. Predicting the accidents has always been the prominent area of study with great value of research. The purpose of this project is to predict the severity of an accident by training an efficient machine learning model with the help of existing accidents data i.e, telangana road records. This project is majorly focussed on predicting classes such as serious, fatal and slight.

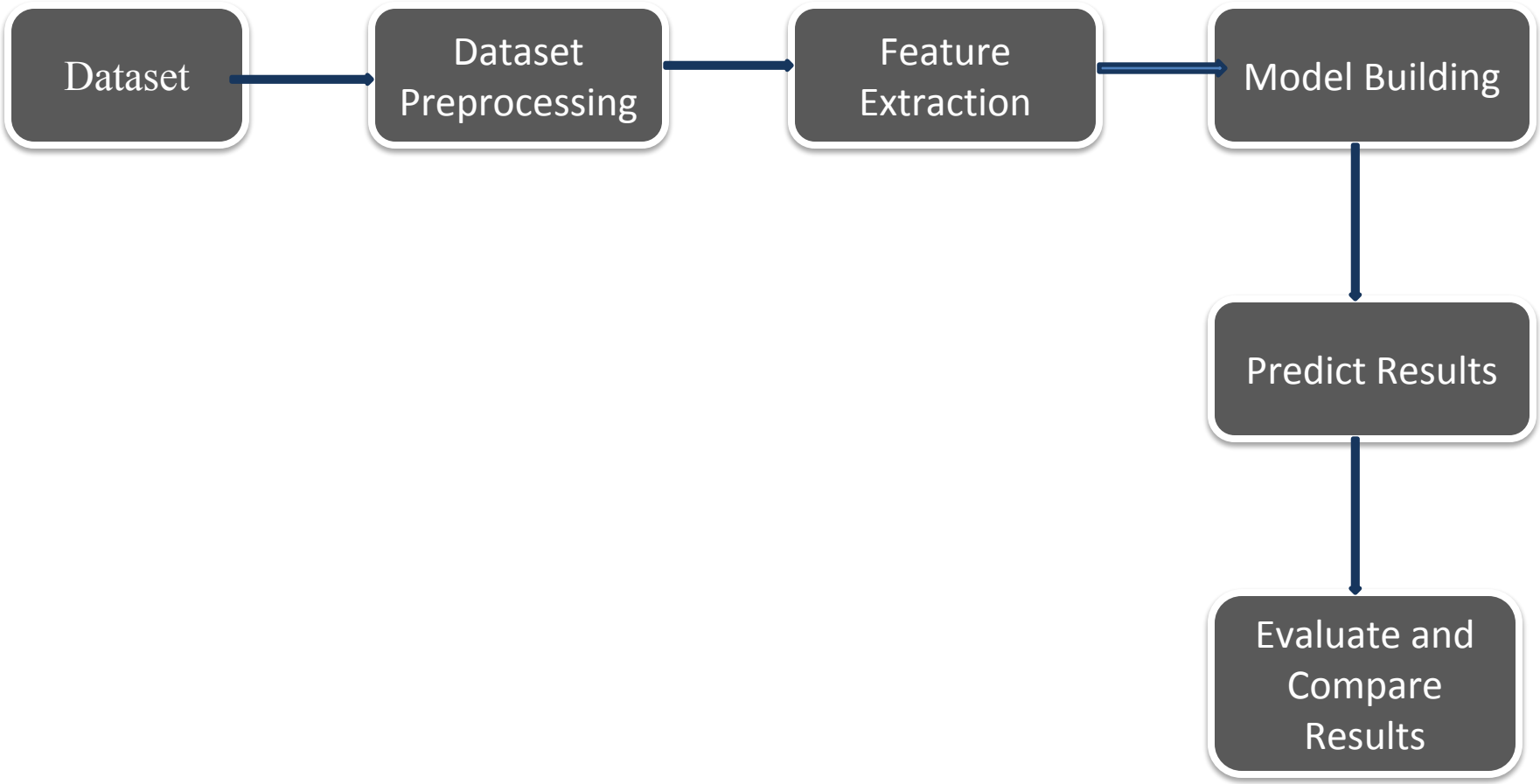
EXISTING SYSTEM

- The current machine learning models are present for UK roads to predict the threshold of accidents.

PROPOSED SYSTEM

- A ML model which is used to identify accident prone areas for Telangana roads.

TECHNICAL ARCHITECTURE



TECH STACK

- Python
- Collab - environment

LIBRARIES

- pandas
- numpy
- sklearn
- plotly

Pros and Cons

Accident Severity prediction is becoming more sophisticated and Important for improving the safety of people. Our application guides people to find whether the area which they are traveling is accident prone or not thereby benefiting the people.

Our application needs manual input from the people like all the parameters like week of travel, day of travel, type of road, whether conditions etc. This is very tedious work to people which can be improved by giving source and destination of person traveling and all the remaining things can be taken care by application.

RESULT

Algorithm	Accuracy
KNN	0.8536342515765019
GuassianNB	0.8679057417855958
Random Forest Classifier	0.8931297709923665
SVM	0.890476100232327
Logistic Regression	0.8904746100232327
Gradient Boosting Machine	0.898440092930639
XGBoost	0.9010952538997676

Thank You