

### **Developing Traffic Volume ( AADT) Prediction Algorithm Using KNN**

AADT plays an important role in planning and designing road infrastructure. It is expensive to install traffic recorders at every section of roads for recording AADT. We have prepared a model based on nearby AADT, which considers the nearby AADT for determining AADT of unknown locations. We collected data from ETRIMIS dataset having features administrative system, government county, functional class, terrain, land use, access control, no of lanes, latitude, longitude and operation. We used instance-based model (K-Nearest Neighbor) for determining the AADT of nearby locations. The data is passed to a pipeline before training, categorical data is encoded using one hot encoder and numerical data using minmax scaler. The R-square of the model was found to be 83%. The model was saved in *joblib* format, which was used in django backend and bootstrap frontend platform for predicting and displaying the predicted output of the new data. Google API was used for extracting the coordinates after a click on map and the other features were selected from dropdown options, and when clicked predict it gives the predicted result of that section.