

By checking the dataset, the dataset has a total of 38 attributes and 194,673 data.

```
In [4]: df.shape
```

```
Out[4]: (194673, 38)
```

At the same time, many attributes have null values.

```
In [6]: df.isnull().sum()
```

```
Out[6]: SEVERITYCODE      0
X      5334
Y      5334
OBJECTID      0
INCKEY      0
COLDETKEY      0
REPORTNO      0
STATUS      0
ADDRTYPE      1926
INTKEY      129603
LOCATION      2677
EXCEPTRSNDESC 109862
EXCEPTRSNDESC 189035
SEVERITYCODE.1    0
SEVERITYDESC      0
COLLISIONTYPE      4904
PERSONCOUNT      0
PEDCOUNT      0
PEDCYLCOUNT      0
VEHCOUNT      0
INCDATE      0
INCDTTM      0
JUNCTIONTYPE      6329
SDOT_COLCODE      0
SDOT_COLDESC      0
INATTENTIONIND    164868
UNDERINFL      4884
WEATHER      5081
ROADCOND      5012
LIGHTCOND      5170
PEDROWNOTGRNT    190006
SDOTCOLNUM      79737
SPEEDING      185340
ST_COLCODE      18
ST_COLDESC      4904
SEGLANEKEY      0
CROSSWALKKEY      0
HITPARKEDCAR      0
dtype: int64
```

I will process the data like this:

1. Remove text attributes like description that cannot be converted into numeric values. Then remove the unrelated latitude and longitude. Then fill in the null value (delete or mean or mode) of each attribute according to the attributes of different attributes, and then regularize the data.
2. Divide the data into training set and test set.
3. Establish the Logistics Regression Model and Random Forest model.
4. Optimize the two models and compare their accuracy.
5. Choose the most suitable model.