

Accident Severity Prediction: Comparing ANN and Pattern search methods

Jiliya Mathew

x20260075

I have added 4 files as a part of the code artifact.

1. EDA- Exploratory Data Analysis
2. PSO-ml-classification-multi-class
3. GWO-ml-classification-multi-class
4. ML-classification-multi-class-roc

Each file has a different purpose. The EDA file is having all the code that I have used for doing the exploratory data analysis. PSO-ml-classification-multi-class is used for applying particle swarm optimization features to the different models. GWO-ml-classification-multi-class file is for applying GWO feature optimization technics to the different models. ML-classification-multi-class-roc is checking the performance of different models.

The dataset was containing 2.8 million records. And I was facing some issues uploading datasets.

Here I am adding the dataset link:

https://www.kaggle.com/code/jingzongwang/usa-car-accidents-severity-prediction/data?select=US_Accidents_Dec20.csv

I have used multiple libraries. and I have imported them into the file installing them will make the configurations. mainly Pandas, NumPy, classification report, seaborn, model_selection, MultinomialNB, TfidfVectorizer, LabelBinarizer, and accuracy score etc, Running the whole code may take a bit of time.