CAR ACCIDENT SEVERITY PREDICTION

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CONTENT

- Problem Definition
- Exploratory Data Analysis
- Feature Engineering
- Model Process
- Model Report
- Summary Conclusion

MODEL PROCESS

- Label Encoding for Categorical features
- Creating Training, Test set by balancing severity ratio
- Training by applying different Classification Techniques
- Model Evaluation and Hyper parameters tuning
- Model Score Report

MODEL SCORES REPORT

- I have used trained the data on 3 different algorithms
- I did Hyper parameter tuning by changing the weights and getting almost same model scores
- I was Training on SVM also it is taking lot of time so not putting that here

	Algorithm	F1-score	Jaccard	LogLoss
0	KNN	0.837984	0.730371	NA
1	Decision Tree	0.838124	0.730551	NA
2	LogisticRegression	0.837691	0.730037	0.556894

SUMMARY CONCLUSION

- Useful and informative models built to predict accident severity
- Value in guiding public traffic polices to focus on important factors to prevent accident injuries
- Accuracy of model has room for improvement, more insights could be gained
  - Collision type be further processed and used in model
  - Accident address be grouped based on injury occurrence ratio and used in model
  - Accident trend by dates

Thank You