Technalytics

Problem Statement

Develop a predictive model that accurately classifies the severity of traffic collisions based on available features such as location, environmental conditions, and collision characteristics.

Dataset column description

Target Column = SEVERITYCODE

1. longitude: Longitude of collision
2. navigationlatitude : Latitude of collision
3. SEVERITYCODE : SDOT collision severity code
4. COLLISIONTYPE : Type of collision
5. PERSONCOUNT : Number of people involved in collision
6. PEDCOUNT : Number of pedestrians involved in collision
7. PEDCYLCOUNT : Number of cyclists involved in collision
8. VEHCOUNT : Number of vehicles involved in collision
9. INJURIES : Number of injuries resulting from collision
10. SERIOUSINJURIES : Number of serious injuries caused by collision
11. FATALITIES : Number of deaths caused by collision
12. JUNCTIONTYPE : Type of junction collision occurred at
13. INATTENTIONIND : Whether a driver involved in the collision was considered distracted
14. UNDERINFL : Whether a vehicle involved in the collision had under inflated tires
15. WEATHER : Weather conditions during collision
16. ROADCOND : Road conditions during collision
17. LIGHTCOND : Lighting conditions during collision (0 - dark, 4 - bright)
18. SPEEDING : Whether a vehicle involved in the collision was speeding
19. HITPARKEDCAR : Whether a parked car was hit during the collision
20. SPDCASENO : SPD Case Number
21. DATE : Date of collision
22. TIME : Time of collision (24 hr, decimal minutes)
23. intersection_related : Whether collision was related to intersection
24. Response_type : Type of SFD response
25. Response_time : Time until response arrived
26. AWND : Average wind speed on day of collision
27. PRCP : Precipitation on day of collision
28. SNOW : Snow on day of collision

29. SNWD : Snow depth on day of collision
30. TAVG : Average temperature on day of collision
31. TMAX : Maximum temperature on day of collision
32. TMIN : Minimum temperature on day of collision
33. WSF5 : 5 minute maximum wind speed on day of collision

Submission format

Following files with instructed format need to be submitted as final submission:

- A csv file with column name 'y' containing the predictions.File naming format to be used is "Teamname_predictions.csv".
- An ipynb file with the codes used. File format to be used is "Teamname_notebook.ipynb".