Project Proposal
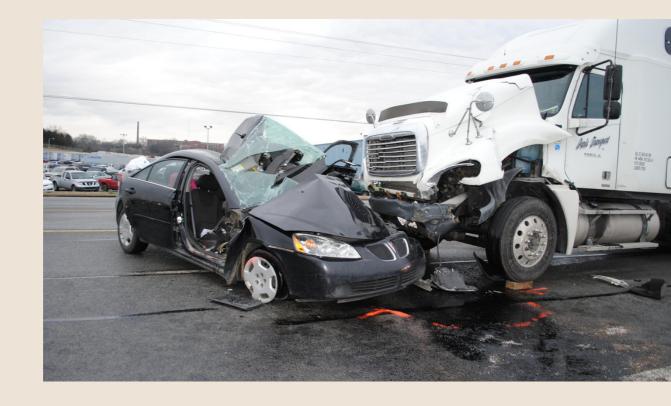

Prepared for :

Epsilon AI

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Elserag Shopping Mall, Residential Building 1,
Makram Ebeid, Nasr City, cairo 11762
https://epsiloneg.com

20
23

About me

Ezzat Hegazy

Senior, systems and
biomedical engineering at
Cairo university

What We Do?

- ## US acicidents EDA

- Data is from kaggle

  - Data Exploration.
  - Preprocessing (cleaning).
  - Outliers handling.

- EDA
- Power Bi

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Objective

- EDA for the data to understand reasons behind accidents, highest regions, factors affecting accidents and trying to reduce them.

About Data

- This is a countrywide car accident dataset that covers 49 states of the USA. The accident data were collected from February 2016 to March 2023, using multiple APIs that provide streaming traffic incident (or event) data. These APIs broadcast traffic data captured by various entities, including the US and state departments of transportation, law enforcement agencies, traffic cameras, and traffic sensors within the road networks. The dataset currently contains approximately 7.7 million accident records.

#	Column	Non-Null Count	Dtype
0	ID	99999 non-null	object
1	Source	99999 non-null	object
2	Severity	99999 non-null	int64
3	Start_Time	99999 non-null	object
4	End_Time	99999 non-null	object
5	Start_Lat	99999 non-null	float64
6	Start_Lng	99999 non-null	float64
7	End_Lat	55995 non-null	float64
8	End_Lng	55995 non-null	float64
9	Distance(mi)	99999 non-null	float64
10	Description	99999 non-null	object
11	Street	99873 non-null	object
12	City	99998 non-null	object
13	County	99999 non-null	object
14	State	99999 non-null	object
15	Zipcode	99971 non-null	object
16	Country	99999 non-null	object
17	Timezone	99900 non-null	object
18	Airport_Code	99723 non-null	object
19	Weather_Timestamp	98438 non-null	object
20	Temperature(F)	97918 non-null	float64
21	Wind_Chill(F)	74179 non-null	float64
22	Humidity(%)	97796 non-null	float64
23	Pressure(in)	98157 non-null	float64
24	Visibility(mi)	97697 non-null	float64

25	Wind_Direction	97760 non-null	object
26	Wind_Speed(mph)	92722 non-null	float64
27	Precipitation(in)	71572 non-null	float64
28	Weather_Condition	97759 non-null	object
29	Amenity	99999 non-null	bool
30	Bump	99999 non-null	bool
31	Crossing	99999 non-null	bool
32	Give_Way	99999 non-null	bool
33	Junction	99999 non-null	bool
34	No_Exit	99999 non-null	bool
35	Railway	99999 non-null	bool
36	Roundabout	99999 non-null	bool
37	Station	99999 non-null	bool
38	Stop	99999 non-null	bool
39	Traffic_Calming	99999 non-null	bool
40	Traffic_Signal	99999 non-null	bool
41	Turning_Loop	99999 non-null	bool
42	Sunrise_Sunset	99704 non-null	object
43	Civil_Twilight	99704 non-null	object
44	Nautical_Twilight	99704 non-null	object
45	Astronomical_Twilight	99704 non-null	object