Car Collisions Analysis Report

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Car accidents have a huge social, economic and environmental impact to our world. In 2013, 54 million people worldwide sustained injuries from traffic collisions. This resulted in 1.4 million deaths in 2013, up from 1.1 million deaths in 1990. About 68,000 of these occurred in children less than five years old. Almost all high-income countries have decreasing death rates, while the majority of low-income countries have increasing death rates due to traffic collisions. Middle-income countries have the highest rate with 20 deaths per 100,000 inhabitants, accounting for 80% of all road fatalities with 52% of all vehicles.

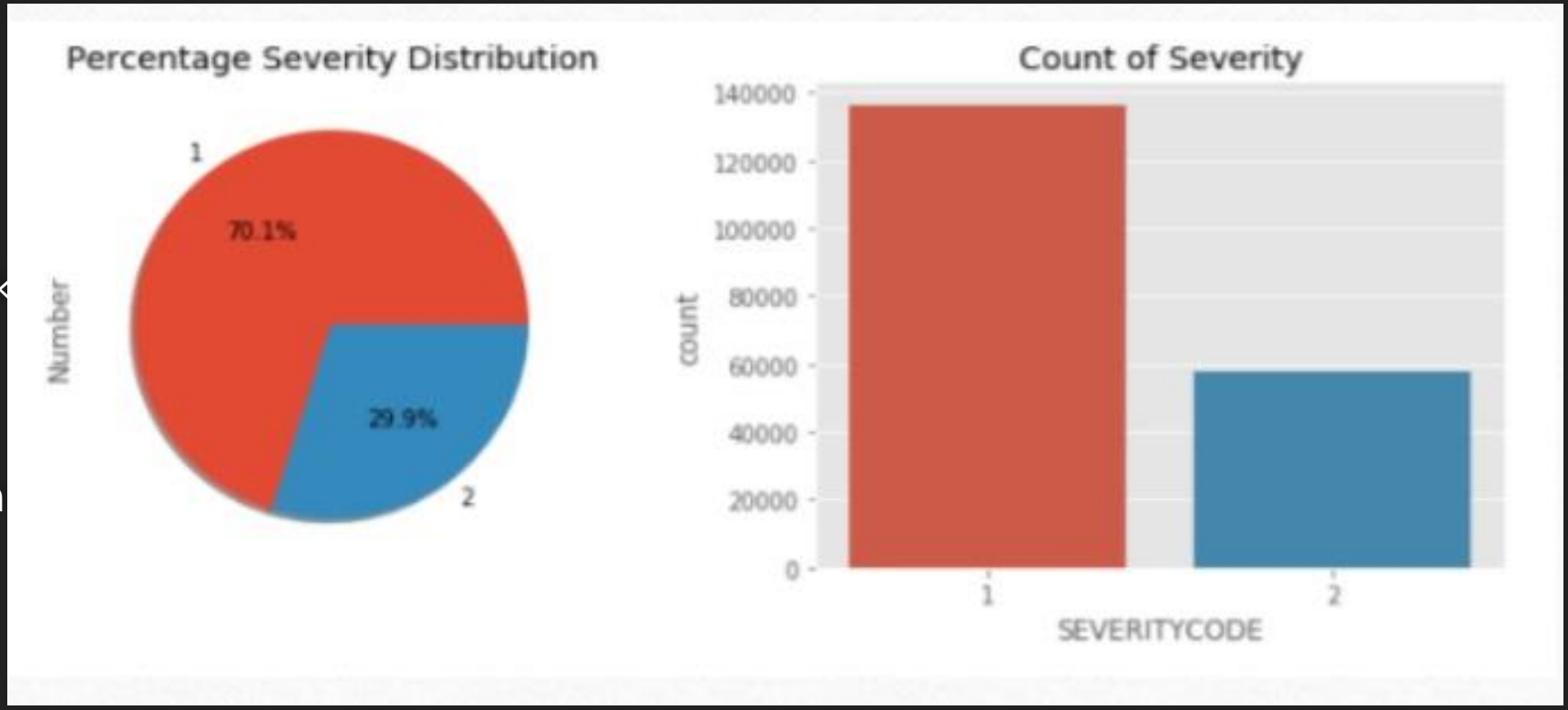
The Data

The dataset is from Seattle City and contains details of traffic accidents in Seattle for the year of 2004 – 2020. The data will be use in the report to analysis car collisions.

	SEVERITYCODE	X	Y	OBJECTID	INCKEY	COLDETKEY	REPORTNO	STATUS	ADDRTYPE	INTKEY	LOCATION	EXCEPT
0	2	-122.323148	47.703140	1	1307	1307	3502005	Matched	Intersection	37475.0	5TH AVE NE AND NE 103RD ST	
1	1	-122.347294	47.647172	2	52200	52200	2607959	Matched	Block	NaN	AURORA BR BETWEEN RAYE ST AND BRIDGE WAY N	NaN
2	1	-122.334540	47.607871	3	26700	26700	1482393	Matched	Block	NaN	4TH AVE BETWEEN SENECA ST AND UNIVERSITY ST	NaN

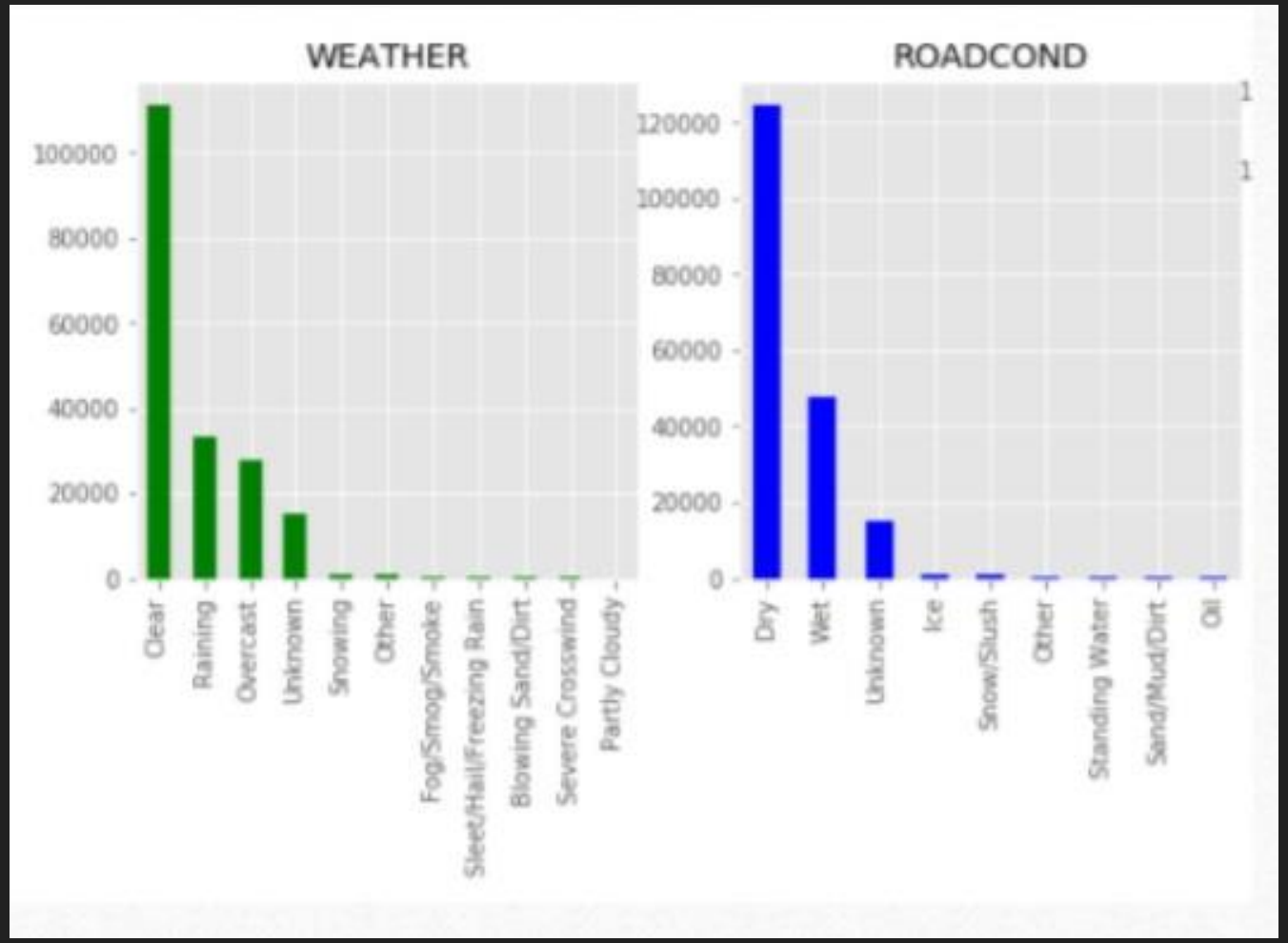
Methodology

Following the cleaning and preparation process, a representation of data is taking place, in order to gain useful information, in an easy and quick way. For the representation of our target value we can conclude than most of the accidents can be categorized in the severity level 1, as show below



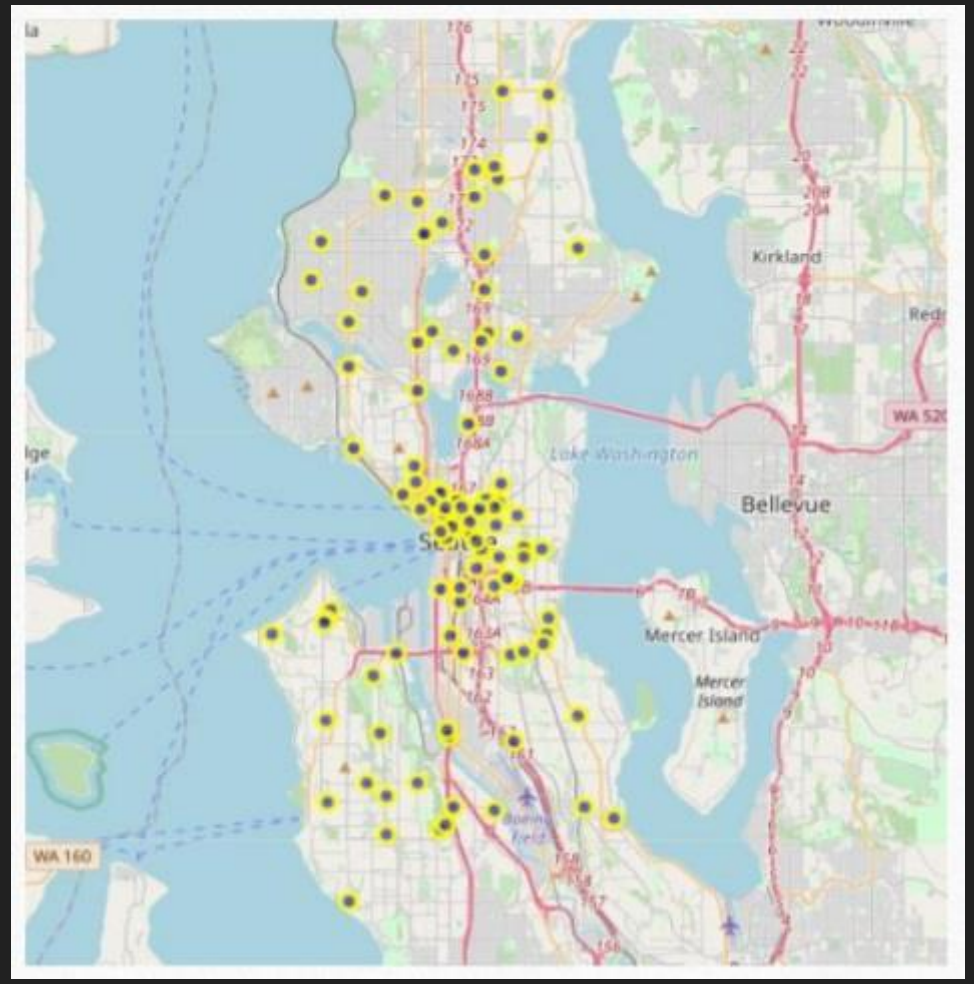
Methodology

Another, interesting thing is to see the distribution of Severity in relation to the weather. And as we can see the chart, the most accident are happening on good weather.



Accident Distribution

we see the distribution of the car accident in map. More car accident happened near downtown area, and spread out around.



Result

- From the data I analysis in the report. I find some interesting things about car accident.
- First, more car accident happened on Friday and less on Sunday. This may direct to people want to back home from work at the end of workday more hurry than normal workday and ready for good weekend. On, Sunday most people stay home and that may be the reason to less car accident.
- Second, the speeding not the main reason of the car accident. Only 4.79% of case with speeding occur. Therefore, speeding is not the main reason of car accident but it will lead to level 2 severity accident.• Third, most car accident happened on clear weather, dry load condition, and good light condition. So, those elements all not the main reason.

Discussion

- First, pull into traffic slowly. Stop, Look, Listen. Be aware of blind spots, including those in rear view mirrors and behind windshield pillars or highway road signs.
- Second, watch for red light runners. Count to three before entering an intersection on a green light. Look both ways and be sure no one is trying to speed through a yellow light. Exercise caution when passing semis.
- Third, keep at least one hand on the steering wheel. Reduce in-car distractions such as changing radio stations or CDs, cell phones, eating or momentarily taking a hand off thewheel.
- Forth, scan 12 seconds ahead. Always concentrate on the area where you will be driving in 10-12 seconds. For highway driving, keep positioned far enough from other cars so if someone were to suddenly stop or swerve, you could avoid them.

Conclusion

- After analysis all the data of car collision in Seattle, US, 2004-2020. We find out some interesting point from the data.