Abstract – WTSC Level 4 Challenge – Team 23050

We present our analysis of the Washington Traffic Safety Commission dataset. We investigate the relationship between the location of a crash, and the ZIP of the driver's home address, finding that approximately 20% of incidents occur with a resident's home ZIP. Over 80% of the drivers involved in crashes reside within Washington State. We identify "higher risk" Zip Codes and enrich our analysis with demographic data from the United States Census Bureau to identify possible causal factors. We are incorporating newly released data about non-fatal crashes to identify broader trends in traffic incidents since 2017. To ensure that domain experts can confirm and continue our work, we deliver a Tableau Dashboard of interactive visualisations, an enriched version of the original datafile, a simple tool leveraging OpenStreetMaps and the python nominatim geocoding library to allow the WTSC to conduct independent reverse-geocoding in the future. Finally, we provide a machine-readable encoding of their data dictionary, which future developers can use to develop human-interpretable tools and visualisations to enable the essential work of the WTSC.