

Fort Worth, Texas has become one of the most populated areas in the United States. With a growing influx of commuters on a daily basis, there is no doubt that there will be a large amount of car crashes in the city. According to the Texas Department of Transportation, in 2020 there were over 15,000 car crashes while in 2021 there were over 17,000 car accidents. In 2022 alone there have been over 3000 car crashes already. Many of these car crashes are likely avoidable and finding the areas that are most susceptible to these accidents will be valuable knowledge for drivers and the city. Applying ESRI ArcGIS Pro's spatial analysis extension to the Texas Department of Transportation's car accident the roads of Fort Worth with high crash and fatality rates will be found and mapped accordingly.

BACKGROUND

With just under 1 million people spanning over an area of over 350 square miles, Fort Worth, Texas is one of the largest cities in the United States. According to the Association for Safe International Road Travel, more than 38,000 people

die every year from car crashes in the United States and an additional 4.4 million are seriously injured from crashes. Along with this, the United States suffers the most road crash deaths pf any high income country. Being able to spot the areas of high car crash and fatality rates in Fort Worth will help minimize the amount of crashes that are occurring in the city.

OBJECTIVE

To classify the most dangerous streets in Fort Worth, Texas using car crash data from the Texas Department of Transformation. With this data a crash rate and fatality rate will be able to be discovered from the shape length of the specified roads. The use of spatial analysis hot spot tools will then be applied to see which roads and days in Fort Worth are the most dangerous for all car crashes and also fatal car crashes.

DATA				
Data	Source			
Car Crash Data Points	Texas DOT—Crash Da and Statistics			
Fort Worth City Limits	Fort Worth GIS			
Tarrant County Streets	Tarrant Appraisal Distr			

Determining the Most Dangerous Streets of Fort Worth, TX Using Spatial Analysis William Hart, Dr. Esayas Gebremichael **Department of Geological Sciences, Texas Christian University, Fort Worth, TX**

ABSTRACT



The areas of highest crash rate susceptibility are in the middle of the city and areas along highway ramps. The area with the highest crash rate was the intersection of East Berry St. and highway 35W. The areas of high fatality rates are show different trends than the



У	Wednesday	Thursday	Friday	Saturday
	5342	5016	5801	5135
	73	31	24	18