

INTRODUCTION TO GIS

Professor Sarah Olimb

Sioux Falls Central Fire Station

This map illustrates the Central Fire Station and its surrounding subdivisions in Sioux Falls, South Dakota. The fire station is marked with a red flame icon and the word "CENTRAL" in red. The map is divided into numerous colored regions, each labeled with a name, such as "Bennett's 1st Addn", "Gale's 3rd Addn", and "Gale's 5th Addn". A legend at the bottom left indicates that black areas represent "Parks". A scale bar at the bottom right shows distances in miles (0, 0.07, 0.15, 0.3).

Figure 1. Central Fire Station and its surrounding subdivisions

This is the first infographic I ever made using ArcGIS Pro. On my first attempt, the subdivisions on the map were too populated to the point where the entire map was filled with just the subdivision names. Thus, with some advice from Professor Olimb, I decided to use `Labeling Properties...`, `Position`, `Remove duplicate labels` and `Buffer` and `Minimum feature size` to remove redundant data and therefore make the map more readable. Too much information, as we all know, leads to zero useful information for the target audience. Thus, I am extremely happy to have learned how to present the most important bits of the information in a concise and beautiful manner.

My favorite feature in this lab was `Halo symbol`, `Format polygon symbol...`, `Color Properties...` and setting custom transparency levels. This alone made the labels on my map look so much better than before.

Where is the Central Fire Station, and what are its surrounding subdivisions?

- Understanding the basic architecture of GIS.
- Learning how to view data attributes and to manipulate the data to gain better insights.
- Practicing the core functionalities of ArcGIS, including map navigation, attribute tables, data labeling, data query systems, layout features, and layout export options.

Conclusions: In this lab, I learned the basics of how to use GIS. The most interesting finding from this, for me personally, was that the Central Fire Station is located right beside the river. Coincidentally, my friends and I visited this exact river area yesterday for dinner. So, I find this amusing. This map is not just shapes and texts of random data; instead, it's a useful lens into our real life, which we can use to gain valuable information that is useful for many areas of our lives.

Data Sources: This lab was based on `lab1_data.zip` which was provided by Professor Sarah Olimb.