



Yutong Jiang

Portfolio

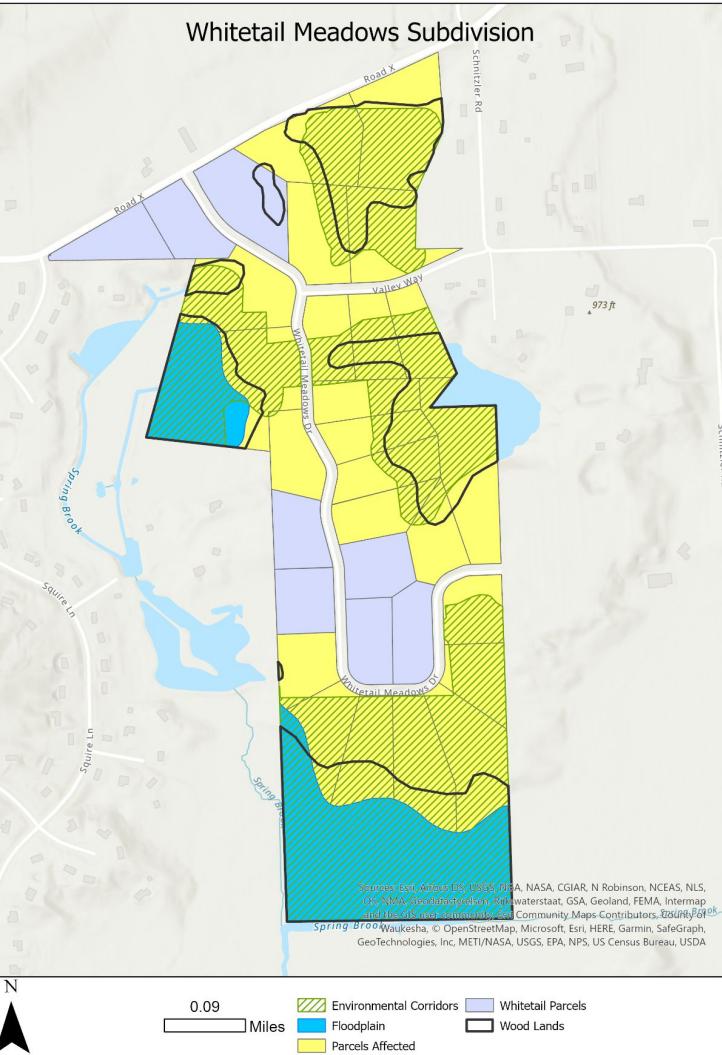
2023

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<https://felix018jiang.github.io/Yutong-Jiang.github.io/>

Section 1

Urban Planning Cartography Projects

Whitetail Meadows Subdivision



Whitetail Meadows Subdivision Spatial Analysis

Duration: Fall 2022, 2 weeks

Category: Spatial Analysis in Urban Planning

Software: Arcgis Pro

Methods: Using land use, floodplain, and natural resource data to evaluate the impact of land development. Using the Union and Clip spatial analysis tool for spatial analysis and Calculate Geometry tool to calculate results.

Course name: Geog 532, Application of GIS in Planning

Brief: This report was aimed at understanding the complex land use patterns and the environmental challenges inherent in the area. Our focus was primarily on the significant extent of floodplains present in Whitetail Meadows, alongside its diverse land uses.

Identifying Ideal Neighborhoods in Madison

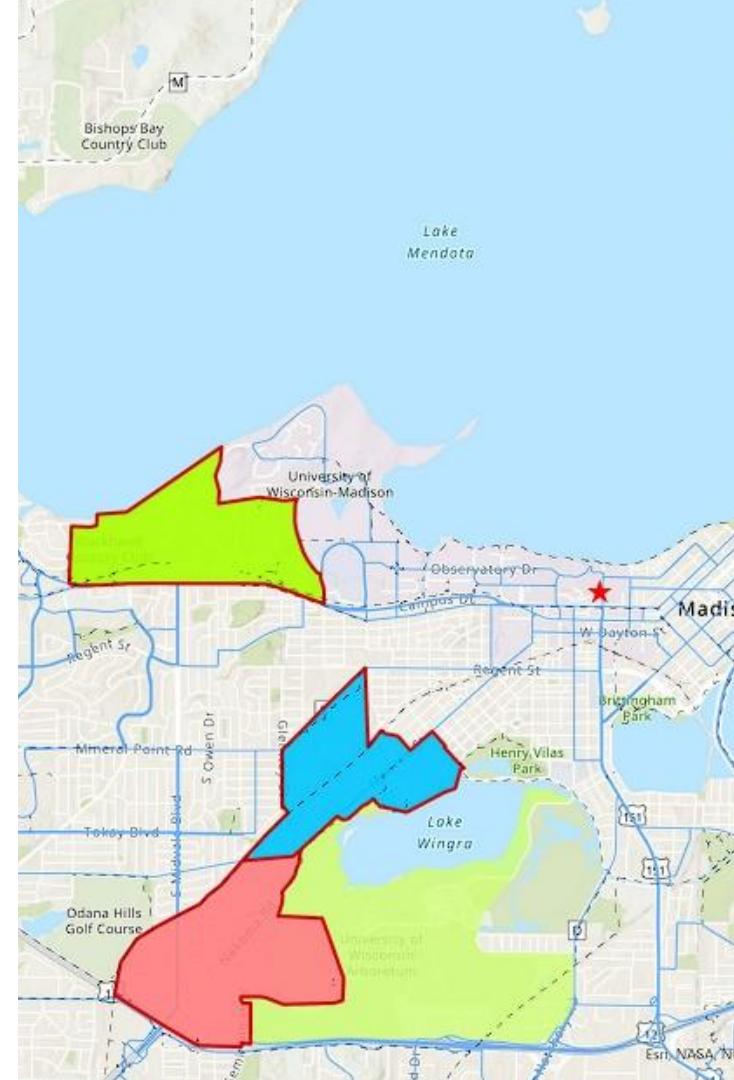
Duration: Fall 2022, 2 weeks

Category: Spatial Analysis in Urban Planning

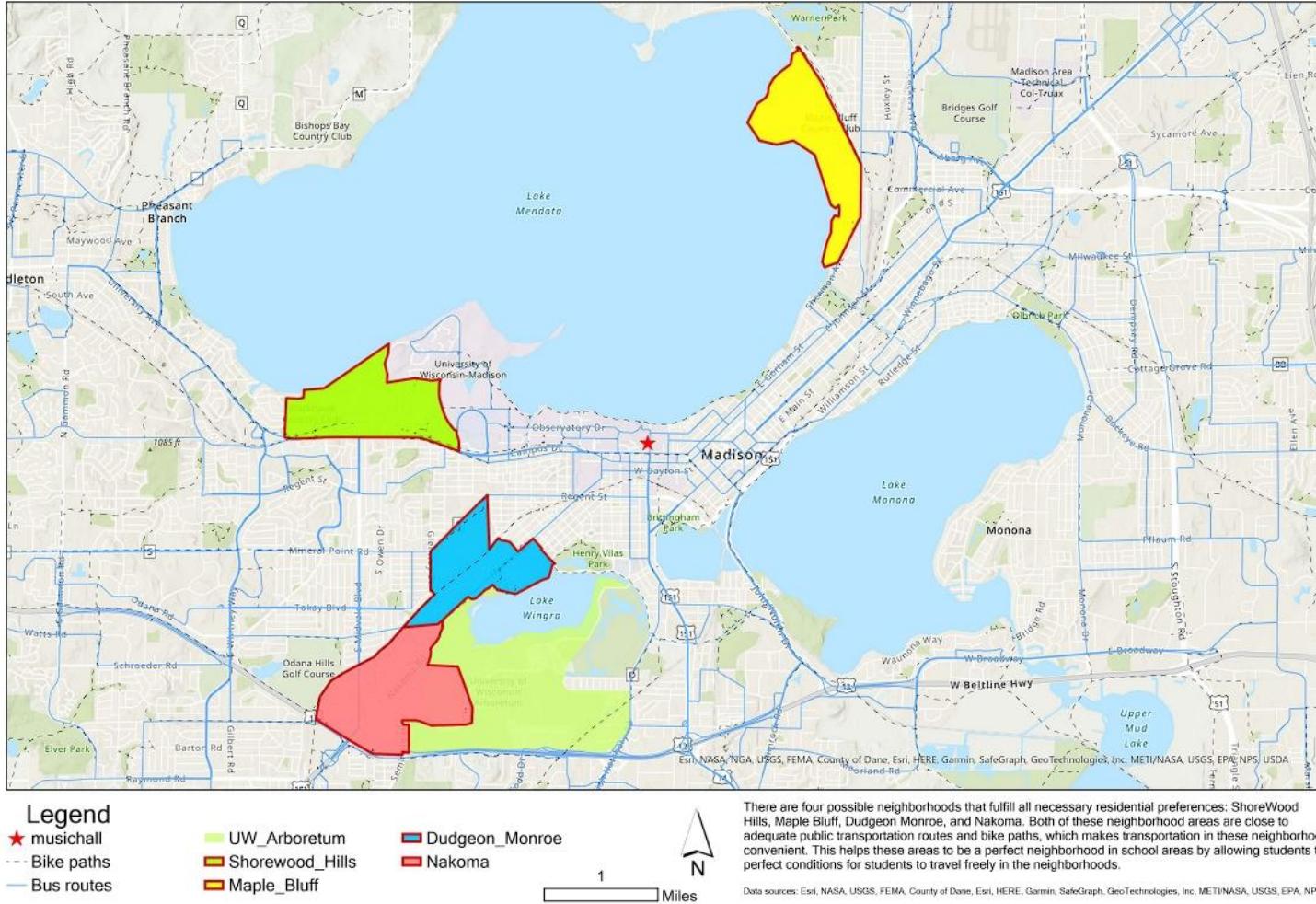
Software: Arcgis Pro, excel

Methods: This project involved spatial analysis using GIS tools, including creating buffer zones, selecting relevant census tracts, and analyzing demographic and geographic data. The focus was on identifying residential neighborhoods in Madison that met specific criteria such as proximity to Music Hall, school districts, natural attractions, and superfund sites, as well as homeowner prevalence.

Course name: Geog 532, Application of GIS in Planning



Ideal Neighborhoods and Public Transportation Around Music Hall



Result/Design

In this GIS assignment, I identified ideal Madison neighborhoods for a new faculty member using spatial analysis. Criteria included proximity to the Music Hall, specific school districts, natural attractions, distance from superfund sites, and high homeownership rates. The project involved creating a detailed, well-designed map, showcasing my GIS skills and aiming to impress a potential future employer.

Assessing Environmental Justice Issues in Dane County

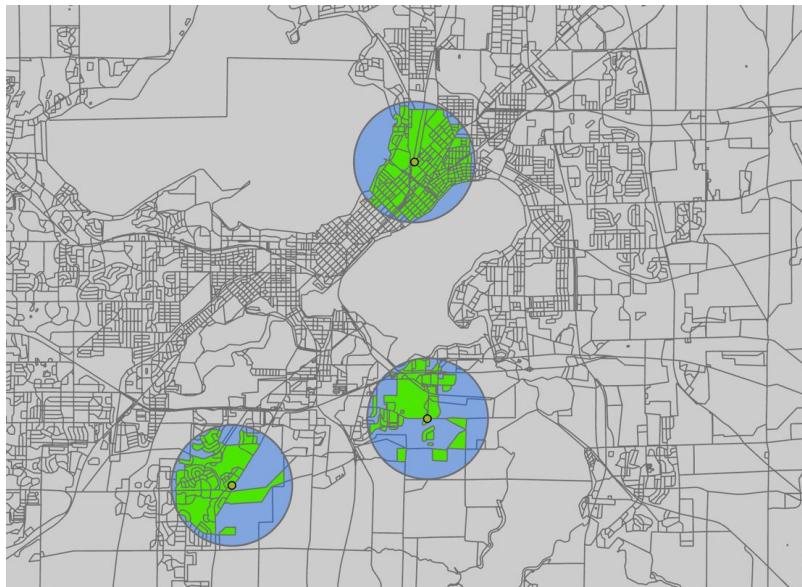
Duration: Fall 2022, 2 weeks

Category: Spatial Analysis in Urban Planning

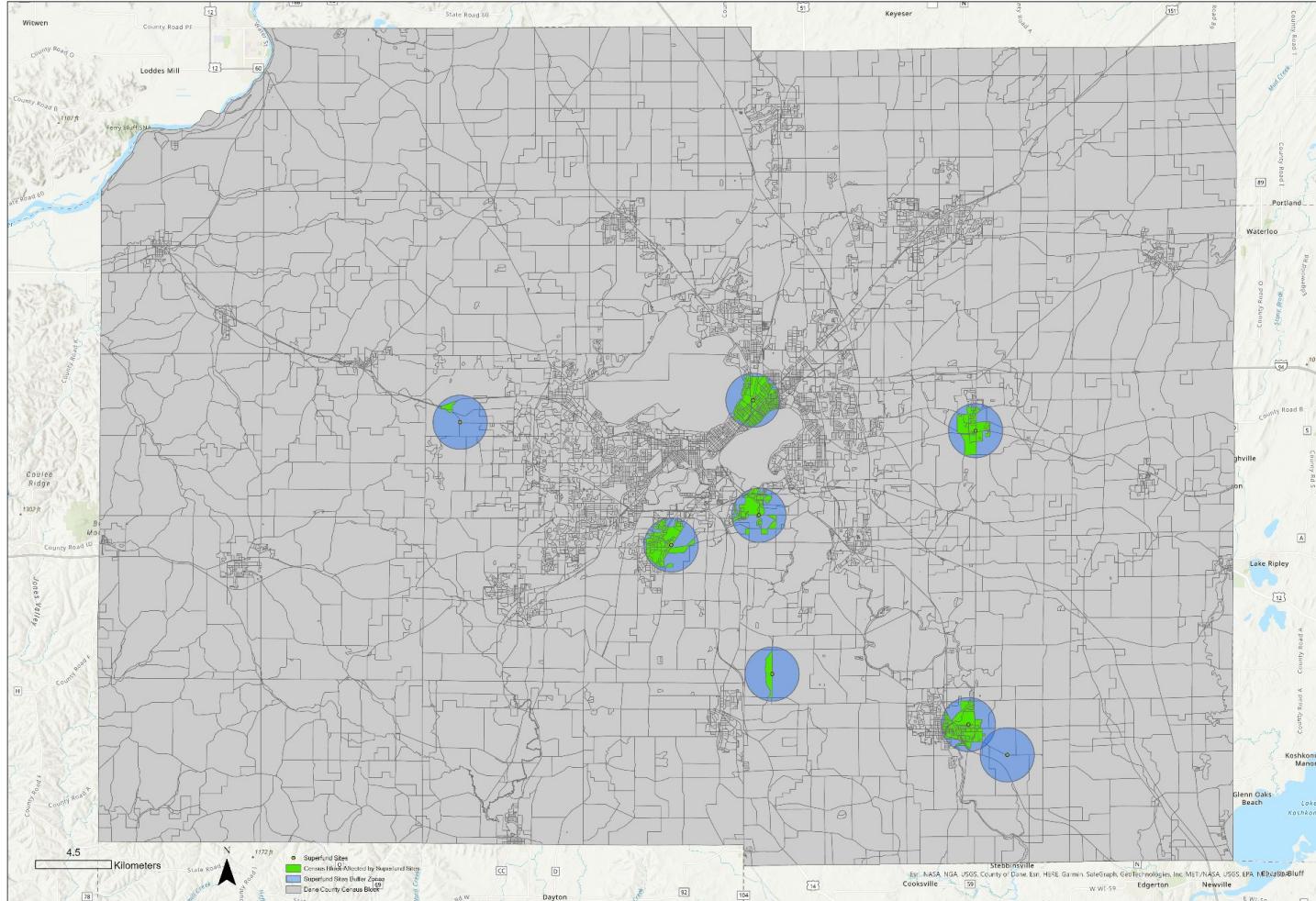
Software: Arcgis Pro, excel

Methods: The project employed methods like creating buffer zones around superfund sites, selecting relevant census blocks, and analyzing demographic data. These techniques, executed using ArcGIS tools, focused on evaluating potential environmental justice issues by examining the impact of superfund sites on diverse populations.

Course name: Geog 532, Application of GIS in Planning



Dane County Map of Superfund Sites

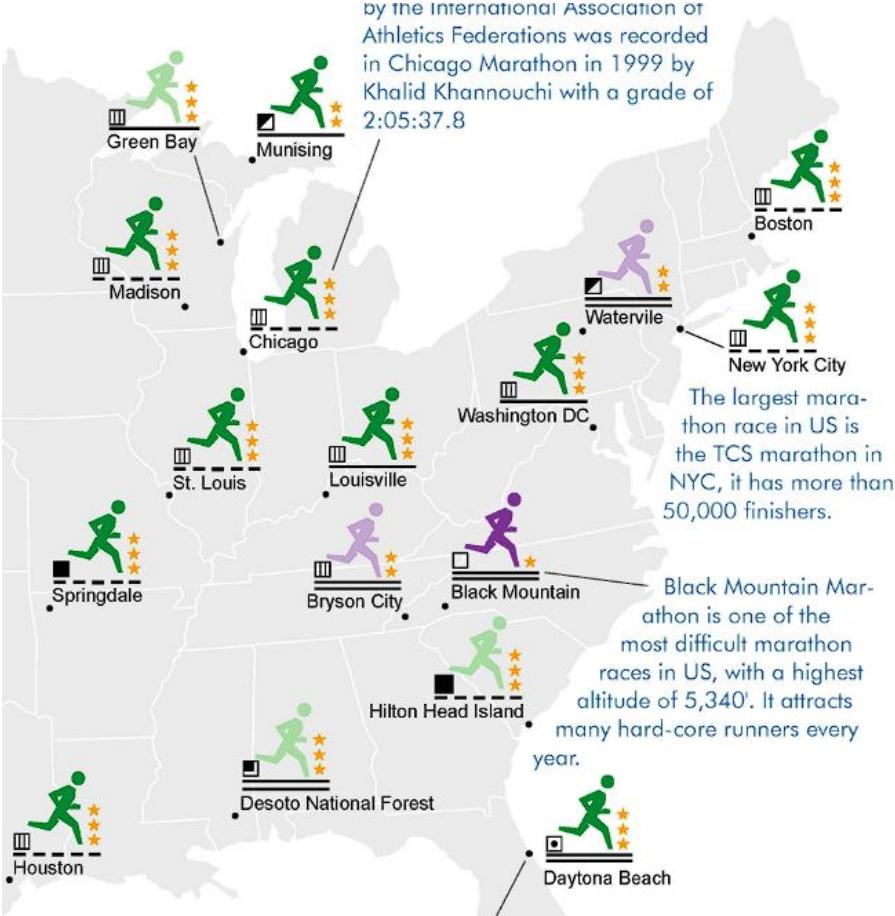


Result/Design

This GIS project evaluated environmental justice in Dane County by analyzing the impact of Superfund sites on local demographics. Techniques included creating buffers around sites, selecting relevant census blocks, and analyzing demographic data to assess if populations near these sites, especially children, the elderly, and minorities, faced disproportionate effects compared to the county norm.

Section 2

Printed Maps



Where's Your Next Race?

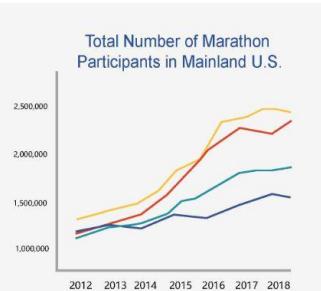
Duration: Spring 2021, 4 weeks

Category: Printed Thematic Map

Software: Arcgis Pro, Illustrator

Methods: In the map's legend, race difficulty is denoted by the color of a running person icon, with bluer hues indicating higher difficulty. Race distance is represented by underlines beneath the icon: two solid lines for ultra-marathons, a dashed line for half-marathons. Additionally, small cube symbols depict the race surface, with each type of surface having a distinct cube. For instance, Madison's popular half marathon, featuring flat terrain on asphalt, is symbolized accordingly.

Course name: Geog 370, Introduction to Cartography



Marathon running is popular, and is becoming more popular during the years. The growth from 2008 to 2018 was +49.43%. Women are picking up faster than men with a growth of +56.83% while men's participation rate has increased +46.91%.



Full marathon average finishing time in 2019.



Current full marathon world's record by Eliud Kipchoge.



This map won the honorable mention in the [49th Annual CaGIS Map Design Competition](#).

In the map's legend, race difficulty is denoted by the color of a running person icon, with bluer hues indicating higher difficulty. Race distance is represented by underlines beneath the icon: two solid lines for ultra-marathons, a dashed line for half-marathons.



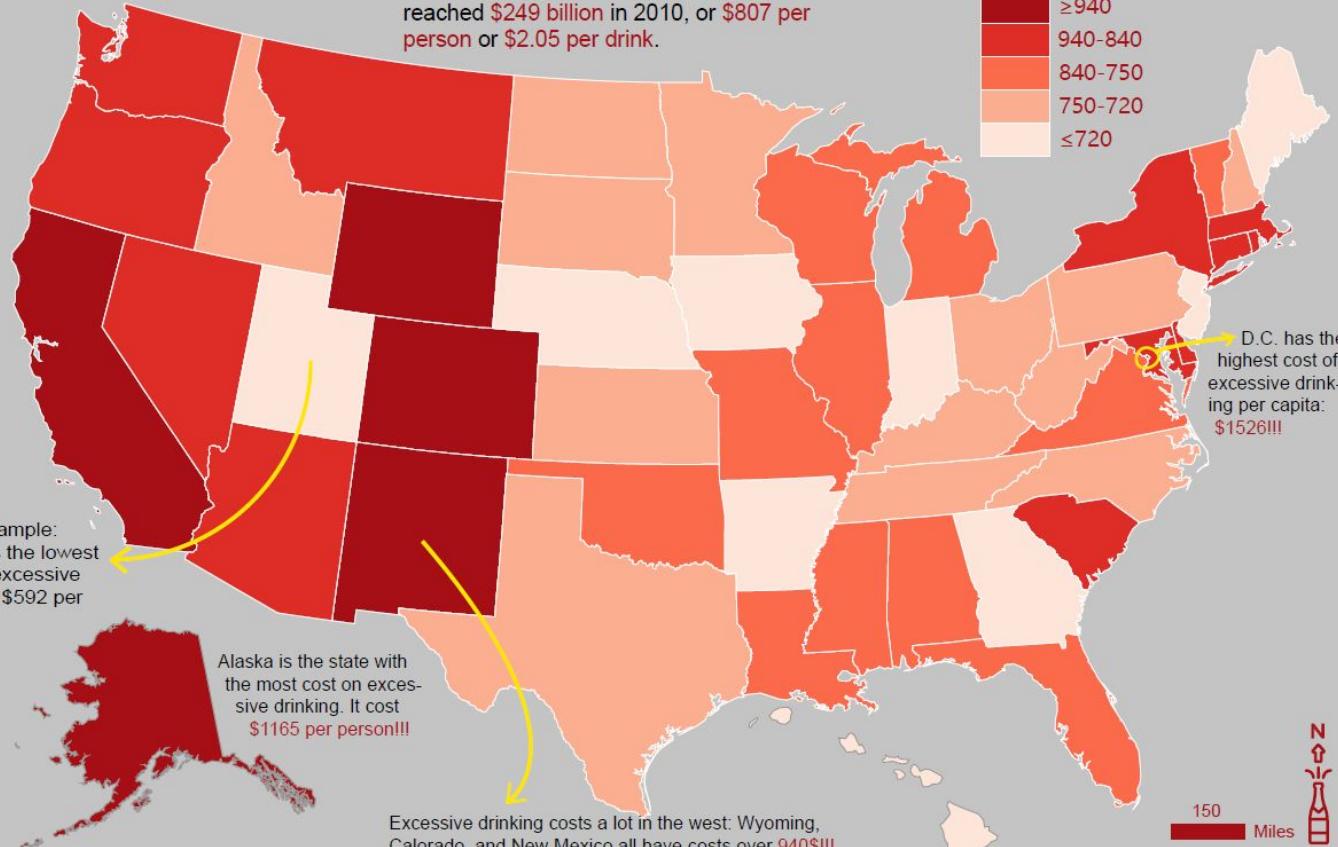
= \$2.05
In economic costs

\$807
per person

Excessive Drinking is Draining the U.S. Economy

The Cost of Excessive Alcohol Use Per Capita In 2010 (\$)

The cost of excessive drinking in the U.S.
reached \$249 billion in 2010, or \$807 per
person or \$2.05 per drink.



Printed Thematic Map

Duration: Spring 2021, 2 weeks

Category: Printed Thematic Maps

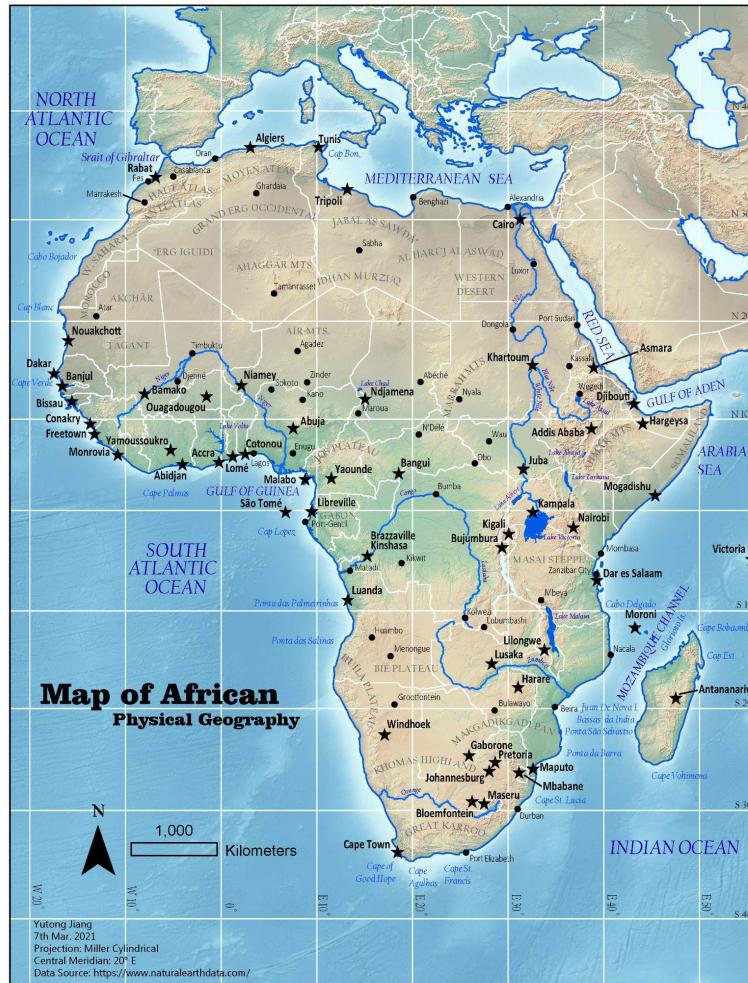
Software: Arcgis Pro, Adobe Illustrator, Excel

Methods: Creating this map follow the steps of data preparation, data connection, symbology adjustment, classifying data, and customizing map designs.

Course name: Geog 370,
Introduction to Cartography

California

Map of National Parks



Reference Maps

Duration: Spring 2021, 2 weeks

Category: Printed Reference Maps

Software: Arcgis Pro, Illustrator

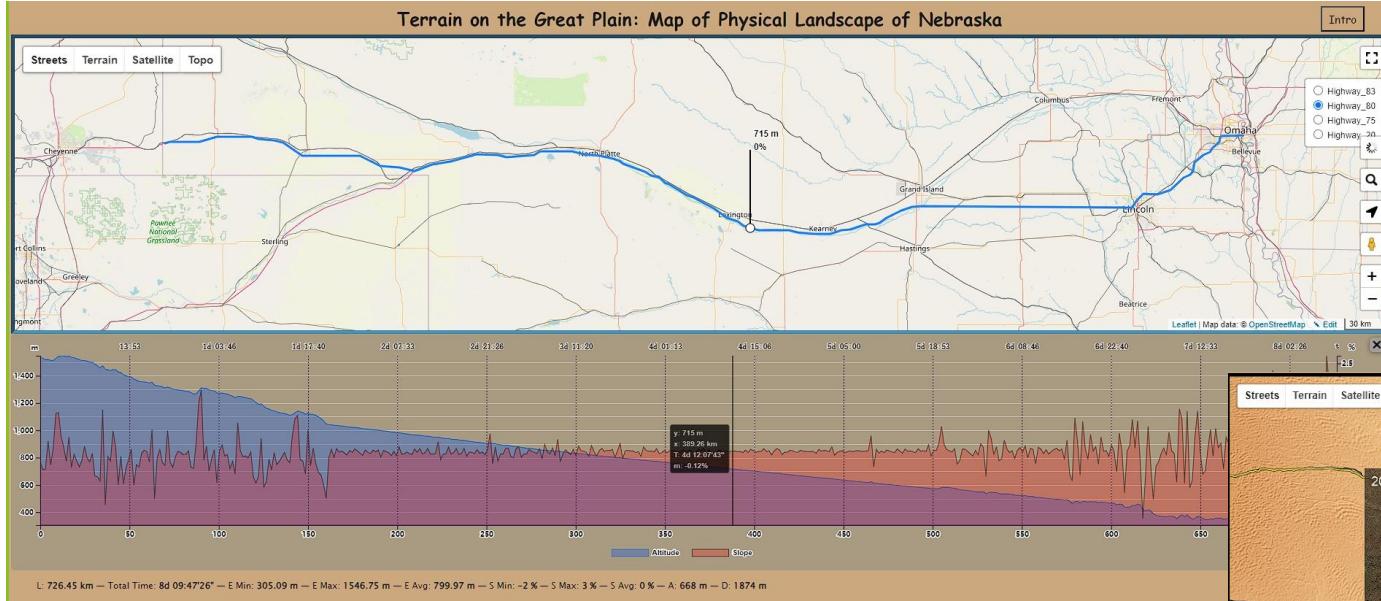
Methods: Retrieve and download the required shape files, select and edit needed map layers, edit and set layout of the map using ArcGis Pro and Adobe Illustrator.

Course name: Geog 370, Introduction to Cartography

Section 3

Interactive Web Cartography

Terrain on the Great Plain: Map of Physical Landscape of Nebraska



Duration: Spring 2023, 4 weeks

Category: Interactive Web Map

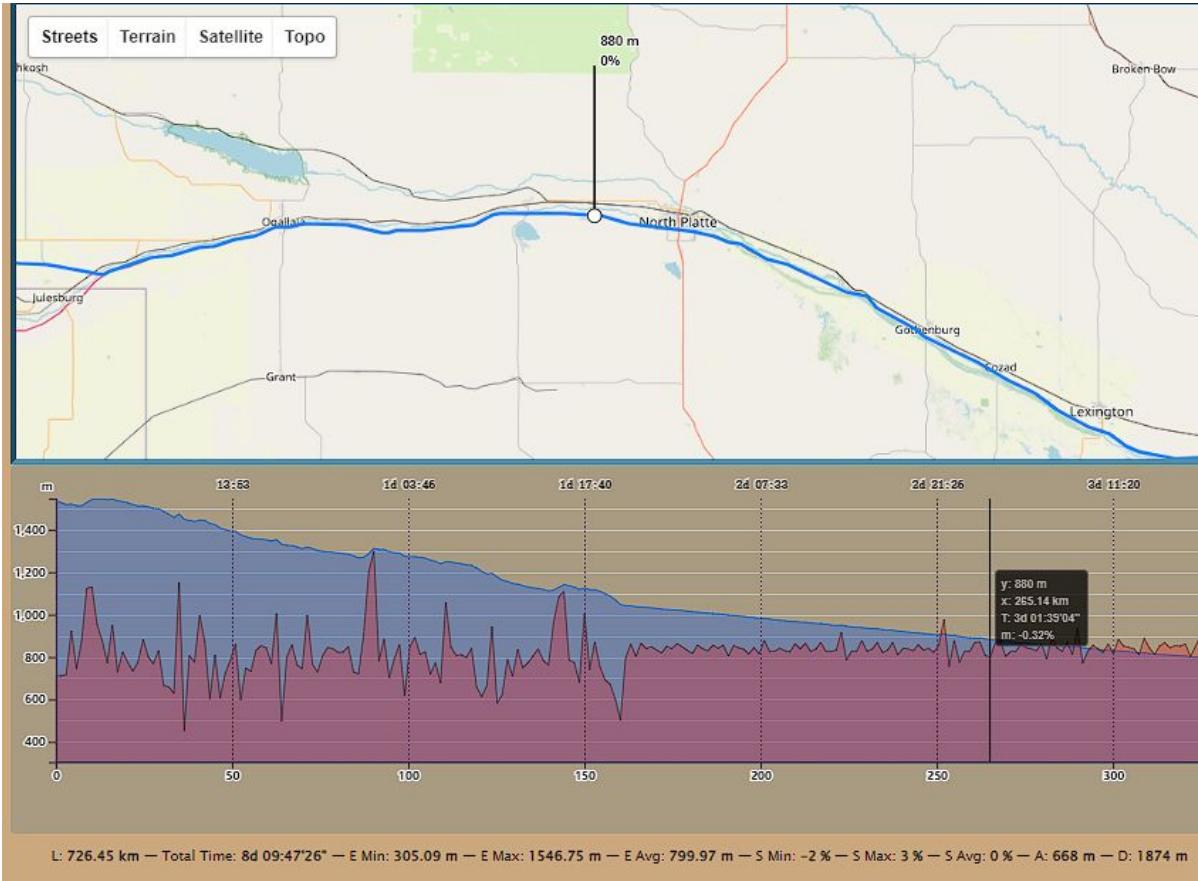
Software: Java script, Leaflet.js, Leaflet elevation.js, QGIS, Html, css, github

Methods: This map uses Leaflet elevation plugin to visualize Digital Elevation Model of a specific geographical feature. It uses leaflet.js to present a interactive map to

Course name: Geog 575, Interactive Cartography Geovisualization

Map Link: https://geography.wisc.edu/cartography/projects/G575/2023SP/2023nebraska_elevation/index.html





The Leaflet digital elevation plugin enable user users to check the specific elevation and slope at each geometric points on a route and it shows the specific geometric coordinates of the points. It also contains a search function to relocate on the map for user to freely explore the map.

Introduction

One way to get an idea about the cost of living in a state is to look at its Median Home Price. The median home price is measured by lining up the house sales of that state in numerical order, from lowest to highest, and then finding the number that is directly in the middle of that list. It splits the distribution neatly into two parts: houses that cost above the median home price of a state, and houses that cost less than the median income of a state.

Definition

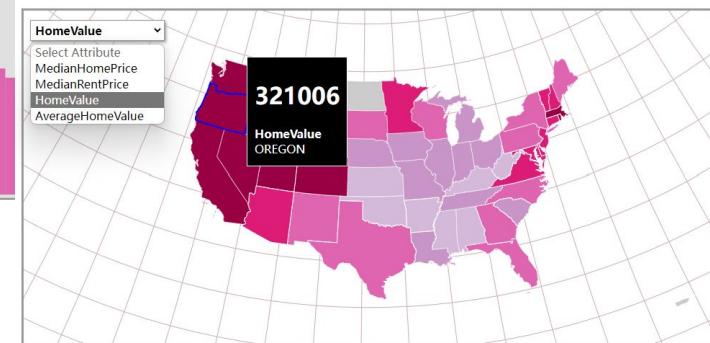
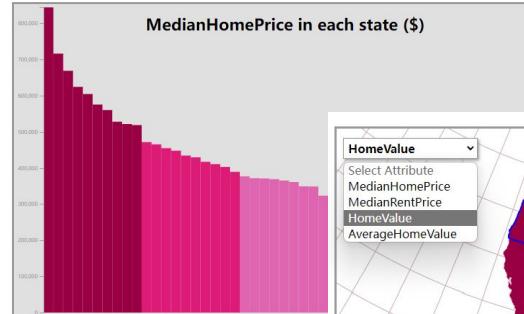
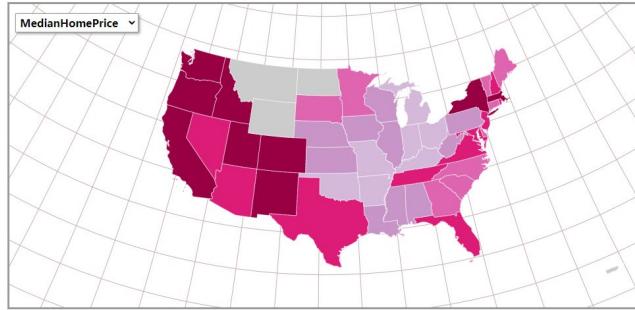
Median Home Price: The median price of a home in May 2022

Median Rent Price: Median rent price per month.

Home Value: A Smoothed seasonally adjusted measure of the typical home value and market changes across a given region and housing type. It reflects the typical value that fall within the 5th to 35th percentile range.

Average Home Value: A smoothed, seasonally adjusted measure of the typical home value and market changes across a given region and housing type. It reflects the typical value for homes in the 35th to 65th percentile range.

Data Source: <https://wisevoter.com/state-rankings/median-home-price-by-state/>



Duration: Spring 2023, 3 weeks

Category: Interactive Web Map

Software: Java script, D3.js, Html, css, github

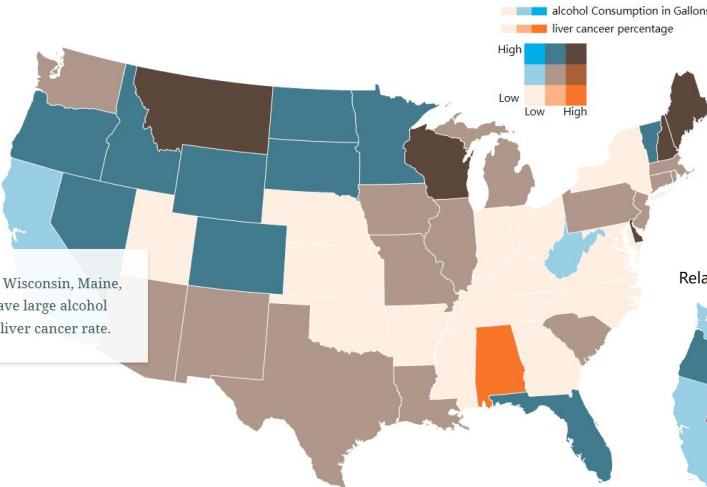
Methods: This web map uses d3.js and topojson to map the visualization of different housing related attributes in united states. It uses D3.js to connect data with geographical features and present interactive visualization about the US

Course name: Geog 575, Interactive Cartography Geovisualization

Map Link: <https://felix018jiang.github.io/Unit-3/>

United States Housing Report

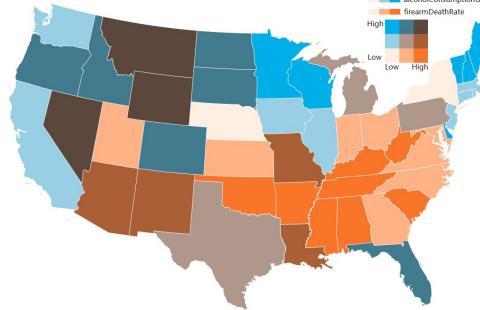
Relationship of Alcohol Consumption and Liver Cancer



For instance, Montana, Wisconsin, Maine, and New Hampshire have large alcohol consumption and high liver cancer rate.

Excessive Drinking: Is excessive drinking harming the society?

Relationship Between Alcohol Consumption and Fire Arm Death Rate



Over the years, consistent findings such as these have stimulated research into factors that might contribute to alcohol-related violence and the question of whether alcohol use is not merely associated with, but perhaps a cause of, violence

Duration: Fall 2021, 3 weeks

Category: Story Map

Software: ArcGis Pro, Arc Gis story map

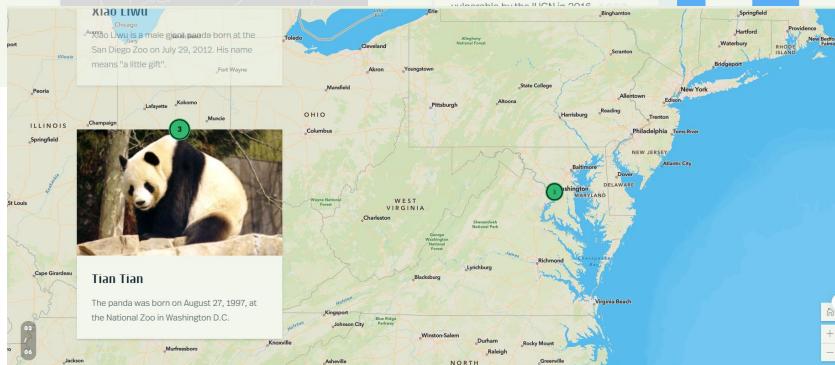
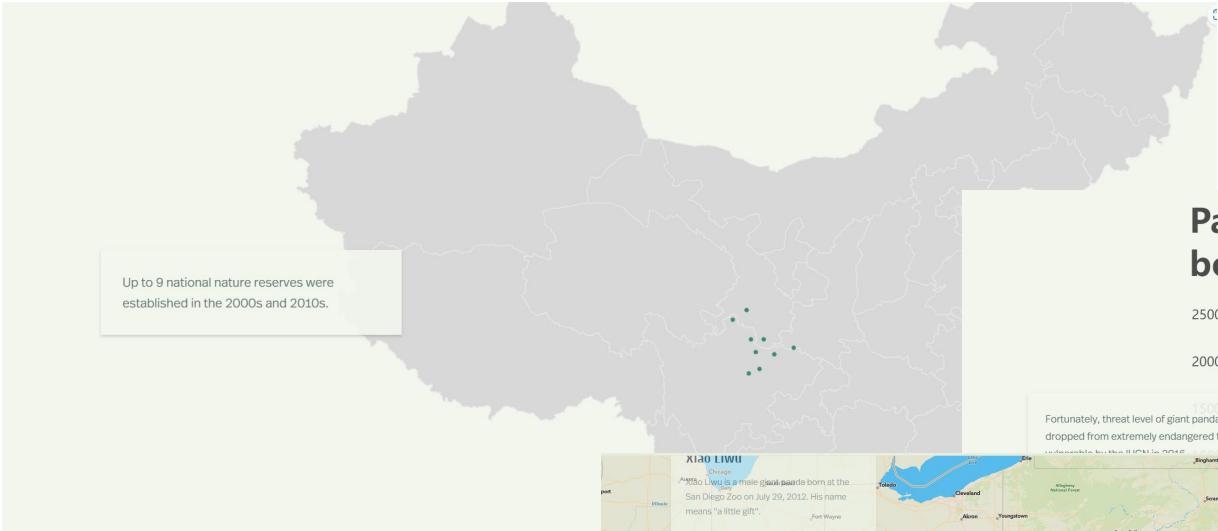
Methods: This story map introduces the definition of excessive drinking and talks about the relationship between social security and excessive drinking issue. It contains several multivariate maps that created using ArcGis Pro

Course name: Geog 572, Graphic Design in Cartography

Map Link: <https://storymaps.arcgis.com/stories/292e7215505646c0b25ba88304384680>

The Story of Giant Panda

Walk Into Giant Panda's Live



Duration: Fall 2021, 3 weeks

Category: Story Map

Software: ArcGis Pro, Arc Gis story map

Methods: This story map introduces the definition of excessive drinking and talks about the relationship between social security and excessive drinking issue. It contains several multivariate maps that created using ArcGis Pro

Course name: Geog 572, Graphic Design in Cartography

Map Link: <https://storymaps.arcgis.com/stories/6183b1e701094d28a9c9da4a8ed5072e>

Panda Population in the wild Re bound

