

Nikol Larsen

Geospatial Technology Portfolio

About me

I'm passionate about building great maps and working with data. I have a Bachelors of Science in Geography from Utah State University and currently working on my Masters in Geospatial Technology from the University of Oklahoma.

I grew up in Utah, am an avid hiker, and love being in the great outdoors.

Skills & expertise

A diagram illustrating skills and expertise. A large orange circle in the center contains the text "ArcGIS Pro". To its left is a gray circle containing "R Studio". To its right is a smaller orange circle containing "Python". Below the central circle is a gray circle containing "Data Management". A horizontal teal line passes through the middle of the diagram, behind the circles.

ArcGIS
Pro

R Studio

Python

Data
Management

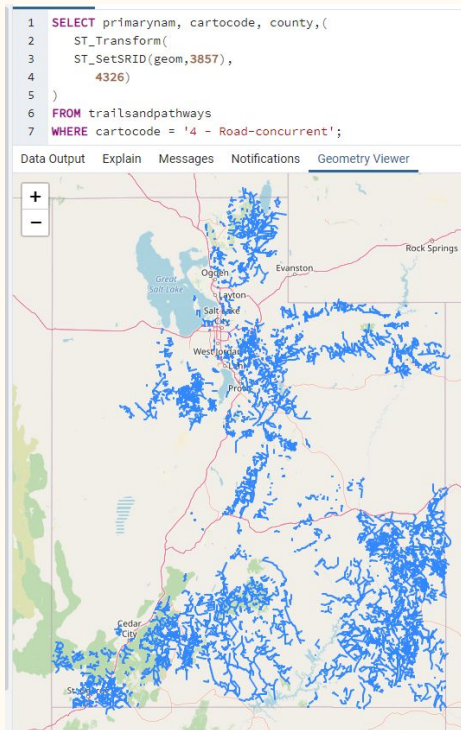
Portfolio samples

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Florida Airports In 2015

In this project we were given the data for the airports in Florida and the counties in the United States. We needed to single out Florida and plot the airports throughout the state. From there we needed to build a presentable map.





```

1 SELECT primarynam, cartocode, county, (
2   ST_Transform(
3     ST_SetSRID(geom,3857),
4     4326)
5 )
6 FROM trailsandpathways
7 WHERE cartocode = '4 - Road-concurrent';

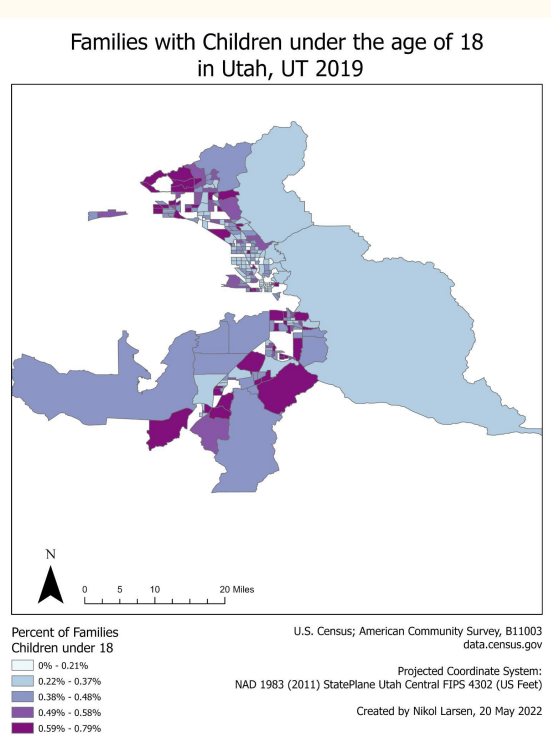
```

Data Output Explain Messages Notifications Geometry Viewer

	primarynam character varying(12)	cartocode character varying(12)	county character varying(1)	st_transform geometry
1	[null]	4 - Road-concurre...	SAN JUAN	0105000020E6100000...
2	[null]	4 - Road-concurre...	SAN JUAN	0105000020E6100000...
3	[null]	4 - Road-concurre...	SAN JUAN	0105000020E6100000...
4	[null]	4 - Road-concurre...	SAN JUAN	0105000020E6100000...
5	[null]	4 - Road-concurre...	SAN JUAN	0105000020E6100000...
6	[null]	4 - Road-concurre...	SAN JUAN	0105000020E6100000...
7	[null]	4 - Road-concurre...	SAN JUAN	0105000020E6100000...
8	[null]	4 - Road-concurre...	SAN JUAN	0105000020E6100000...
9	[null]	4 - Road-concurre...	SAN JUAN	0105000020E6100000...
10	[null]	4 - Road-concurre...	SAN JUAN	0105000020E6100000...
11	[null]	4 - Road-concurre...	SAN JUAN	0105000020E6100000...
12	[null]	4 - Road-concurre...	SAN JUAN	0105000020E6100000...
13	[null]	4 - Road-concurre...	SAN JUAN	0105000020E6100000...
14	Navajo Begay	4 - Road-concurre...	SAN JUAN	0105000020E6100000...
15	Sky Ranch	4 - Road-concurre...	WASHINGTON	0105000020E6100000...
16	Antelope Road (b...	4 - Road-concurre...	WASHINGTON	0105000020E6100000...
17	[null]	4 - Road-concurre...	SAN JUAN	0105000020E6100000...
18	[null]	4 - Road-concurre...	WASHINGTON	0105000020E6100000...
19	[null]	4 - Road-concurre...	WASHINGTON	0105000020E6100000...
20	[null]	4 - Road-concurre...	WASHINGTON	0105000020E6100000...
21	Antelope Road (b...	4 - Road-concurre...	WASHINGTON	0105000020E6100000...
22	[null]	4 - Road-concurre...	SAN JUAN	0105000020E6100000...
23	[null]	4 - Road-concurre...	SAN JUAN	0105000020E6100000...
24	[null]	4 - Road-concurre...	WASHINGTON	0105000020E6100000...
25	[null]	4 - Road-concurre...	WASHINGTON	0105000020E6100000...

PostGIS Hiking Trails in Utah

Using SQL to find the different concurrent trails in Utah.



Family Types in Utah 2019

Mapped the census data for Utah County for 2019 that shows the families that have children under the age of 18.

Career highlights

Development Analysis

Open Mountain Energy, UT
August 2022 - Present

GIS Tech

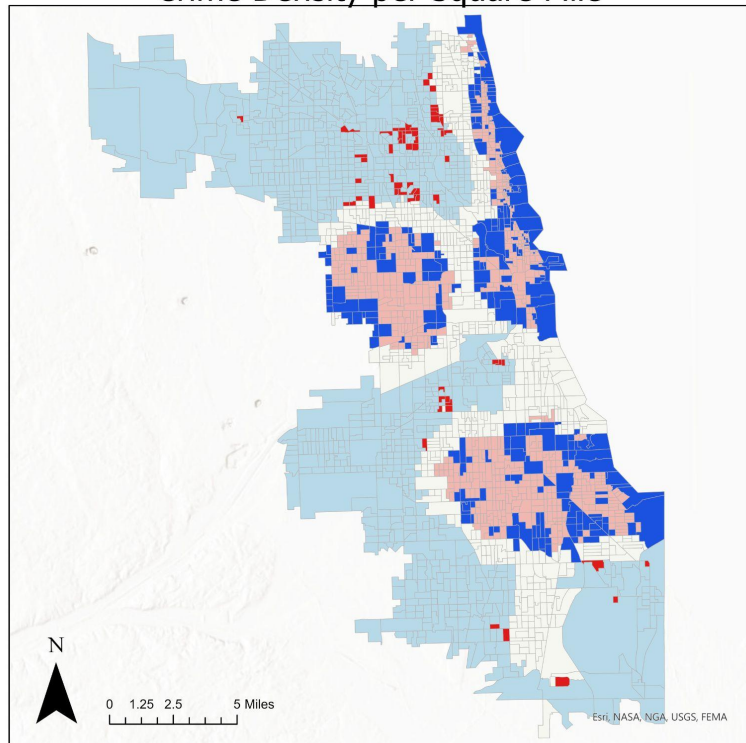
Vivint, UT
May 2015 - September 2015

GIS Tech

VSolvit, Remote
January 2014- April 2015

Projects

Cluster/Outlier Analysis of Chicago, Illinois's Crime Density per Square Mile



Cluster/Outlier Analysis

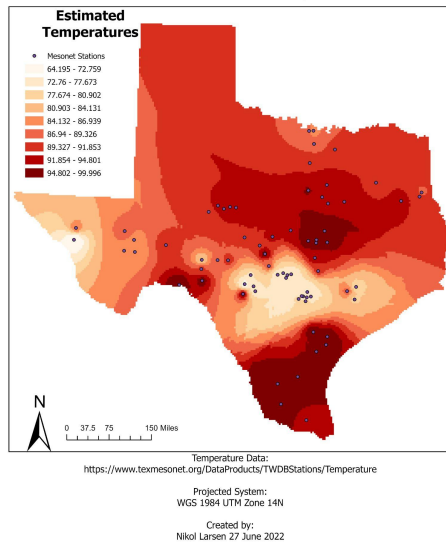
- High-High cluster
- High-Low outlier
- Low-High outlier
- Low-Low cluster
- Not significant

Crime data:
<https://data.cityofchicago.org/PublicSafety/Crimes-Map-dfnk-7re6>

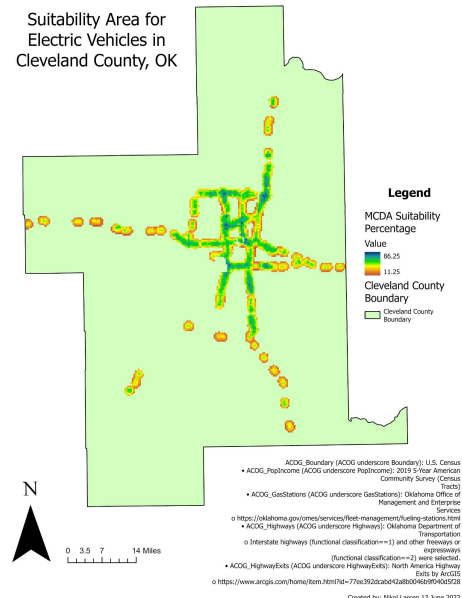
Projected System:
NAD_1983_StatePlane_Illinois_East_FIPS_1201_Feet

Created by: Nikol Larsen 21 June 2022

Estimated Temperatures of Texas with IDW Interpolation



Suitability Area for Electric Vehicles in Cleveland County, OK



```
In [1]: 1 # Creating a user input of the types of trails a user would like to go on.
2 # This will produce a group of trails within each Carto Code to give a list of trail names to adventure on.
3
4 # Import modules
5 import arcpy
6 from arcpy import env
7
8 #Set workspace
9 arcpy.env.workspace = r"C:\Users\Kaleel\OneDrive\Desktop\Summer_GIS5653_Python\TermProjectSummer2022\Term Project\TermProjectGIS_5653\TermProject
10 out_workspace = r"C:\Users\Kaleel\OneDrive\Desktop\Summer_GIS5653_Python\TermProjectSummer2022\Term Project\TermProjectGIS_5653\TermProjectGIS_5653
11
12 #Set up Local variables
13 # List of what each Carto Code stands for:
14 # 1= Hiking only
15 # 2= Hiking and Biking
16 # 3= Paved Shared
17 # 4= Road Concurrent
18 # 5= Biking only
19 # 7= Steps
20 # 8= Bridge, Tunnel
21 # 9= Links
22 in_features = "trails"
23 trails = Input("Enter type of trail to travel on in Utah County: ")
24 out_feature = "UtahCntyTrails.shp"
25 user_query = '"in_features" = \'trails\''.format(in_features, trails)
26
27 Enter type of trail to travel on in Utah County: 1- Hiking Trail
```

Contact

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