Sam Shuster

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EDUCATION

University of Georgia – Franklin College of Arts and Sciences
Bachelor of Science in Geography, Certificate in GIS

- Major GPA: 3.95/4, Cumulative GPA: 3.31
- Data Science in Geography, Programming for GIS, Advanced Geospatial Statistics, Digital Image Analysis, Geovisualization and Data Visualization, Aerial Image Interpretation/Photogrammetry

TECHNICAL PROFICIENCIES/SKILLS

Programming: Python, SQL, HTML, Java Script, R
Data Visualization: Tableau, Power BI
GIS: ArcGIS Pro and ESRI tool suite, QGIS, GeoDa, Google Earth Pro, QCAD
Remote Sensing/ Data Acquisition: Google Earth Engine, ERDAS IMAGINE, SNAP, ENVI
Bilingual *– native speaker of both Spanish and English*

EXPERIENCE

Geospatial Data Analyst – Norfolk Southern *February 2022- Present*

- Utilized Python-based tools for the creation, modification, and quality control of essential geospatial infrastructure data for company wide use for a variety of critical applications, including the analysis and assembly of geospatial data utilized to assist PTC compliance.
- Facilitated the implementation of Linear Asset Management, allowing the company to leverage investment in geospatial technology to generate value and identify cost savings using analytical techniques.
- Called upon to work with other involved groups and departments in a collaborative manner to fully utilize the technical skill sets of the Geospatial Data Group toward the Enterprise goals.

Paid Undergraduate Research Assistant – DAYMET Precipitation Analysis *September 2021 - Dec 2021*

- Wrangled 20 years of precipitation data from NASA's DAYMET dataset, utilizing NASA's CMR API, OPeNDAP, and the Google Earth Engine API, inside Jupyter notebooks.
- Extracted county-level geostatistics to better understand how climatological drivers influence various community dynamics.

Paid Undergraduate Research Assistant – Community Mapping Lab & BikeAthens *August 2021 - Dec 2021*

- Worked in tandem with the BikeAthens nonprofit group to collect and vet city data as well as community input.
- Developed an interactive webmap detailing the most suitable cycling routes through Athens, GA utilizing QGIS, ArcGIS online, and mapbox's API.

Paid Undergraduate Research Assistant – Indus Valley Paleoclimate and Monsoon *October 2020 - Dec 2021*

- Constructed biological profiles from lake sediment extracted from the Indus Valley region. Sediments used to model the paleoclimate of the region approximately 5500 years ago in order to better understand how an advanced civilization called the Harappa suddenly went extinct.
- Findings will go towards better understanding the Indian Monsoon season and contribute to forecasting future food insecurity and agricultural productivity for the region as well as informing current understanding of ENSO.
- Performed geochemical analysis on lake sediment core samples in order to create biological profiles of each sample site.

Time-Series Analysis on the Urban Growth of Denver, CO *May 2021*

- Utilized Google Earth Engine and Landsat imagery to conduct a time-series analysis on the Landuse/Landcover change of Denver, CO from 1986 - 2021.
- Conducted machine learning supervised classification and change detection to explain growth of the urban center and corroborated findings with Census data.

Geostatistical Analysis of Violent Crime in Atlanta, GA *May 2021*

- Conducted geostatistical analysis of Atlanta crime data, utilizing cluster identification and multiple spatial regression techniques.
- Identified problem areas and significant risk factors contributing to increased criminal activity with block-level resolution.

CAMPUS INVOLVEMENT & LEADERSHIP

Community Mapping Lab – Athens, GA *August 2021 – Dec 2021*
Environmental Change Lab – Athens, GA *October 2020 – Dec 2021*
***Scrumhalf*, UGA Club Rugby** *January 2019 – Dec 2021*
Involvement has fostered strong communication, teamwork, and leadership skills, as well as mental fortitude.