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

EXPERIENCE

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.

Elephant Migration Patterns of KAZA *December 2020*

- Led team of 3 through the implementation of remotely sensed data from multiple sensors alongside tracking data from GPS enabled collars to create a time series of elephant movement patterns based on factors like seasonal resource availability and human influence.
- Created graphical and cartographic visualizations of findings.
- Utilized raster data and personally digitized features derived from satellite imagery to create maps of the study area.

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.
Geography Undergraduate Student Organization – Athens, GA *August 2020 – Dec 2021*