Emily Cranston

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EDUCATION

George Washington University M.S. Geography and Environment **August 2025 - May 2027**

University of Georgia B.S. Geography; Certificate in GIScience **June 2023 - May 2025**

RELEVANT EXPERIENCE

GIS Intern (Academic), University of Georgia, Dept. of Geography **January 2025 - May 2025**

- Conducted spatial analysis using ArcGIS to identify food deserts and transit deserts across Tarrant County, TX, based on supermarket access, vehicle ownership, and proximity to transit routes.
- Examined racial and socioeconomic disparities in access to essential services, revealing that food and transit inequities affect both low-income and higher-income communities, with varied impacts across BIPOC populations.
- Created a publicly accessible ArcGIS StoryMap to communicate findings and support equitable planning and policy recommendations.

UK Climate Modeling Intern, University of Georgia / University of Exeter **April 2024 - May 2025**

- Explored whether combining 12 km climate data with topographic corrections could approximate the results of 1 km model outputs, aiming to balance model accuracy and computational efficiency.
- Analyzed UKCP18 regional climate model (RCM) datasets to evaluate the influence of spatial resolution on the accuracy of meteorological variables.
- Prepared parcel-level shapefiles in ArcGIS Pro for the Lyme National Trust region and collaborated with UK partners to integrate topographic data for high-resolution climate analysis.

Independent Student Research, University of Georgia, Dept. of Geography **May 2024**

- Conducted an in-depth analysis using ArcGIS and Python to examine the correlation between wildfire occurrences and changes in mountain bluebird habitat ranges over a 20-year period.
- Mapped high-risk areas susceptible to future wildfire disruptions and identified potential future habitats less affected by wildfires and climate change.
- Developed targeted conservation strategies to protect and restore nesting sites in fire-prone regions, ensuring the long-term sustainability of mountain bluebird populations.

OTHER EXPERIENCE

Undergraduate Research Assistant, Environmental Change Lab **September 2023 - May 2025**

- Processed and analyzed sediment core samples, including sub-fossil midge analysis, to reconstruct long-term climate and environmental change, with a focus on identifying abrupt and gradual shifts in climate during the Holocene.
- Utilized ArcGIS Pro to map sediment core collection sites, identifying patterns in paleoenvironmental data across different geographic regions.
- Contributed to the preparation of technical reports and scientific papers that communicate key findings on the connections between climate variability, fire regimes, and forest dynamics in the U.S. Intermountain West.
- Applied non-destructive imaging techniques, including XRF and X-ray scans, to date sediment cores and analyze geochemical properties, aiding in the reconstruction of past climate conditions in the Intermountain West and Himalayas.

CAMPUS INVOLVEMENT

American Society for Photogrammetry & Remote Sensing, Social Media Coordinator **August 2024 - May 2025**

- Increased event participation by 25% through engaging social media content.
- Engaged with local professionals to promote professional development workshops and community involvement.

Weather Research and Forecasting (WRF) Team, Statistical Analyst **August 2023 - May 2025**

- Improved the UGA WRF model by validating outputs against real-time data and conducting statistical analyses to compare model performance with GFS, ECMWF, and NAM outputs.

AWARDS

CURO Research Award, University of Georgia **August 2024 - May 2025**

HOPE Scholarship, State of Georgia **August 2020 - August 2024**

SKILLS

ArcGIS Pro, Python, R, MATLAB, ENVI, GoogleEarth Engine