Emily Cranston
emily.cranston@uga.edu | (470) 504-2077 | Athens, GA

EDUCATION

University of Georgia **June 2023 - May 2025**
B.S. Geography; B.S. Atmospheric Sciences; Certificate in GIScience GPA: 3.3/4.0

SKILLS

Programming: Python, R, MATLAB
GIS Software: ArcGIS Pro, ENVI, GoogleEarth Engine

AWARDS

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

PROFESSIONAL EXPERIENCE

Environmental Change Lab, Undergraduate Research Assistant **Sept 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

RESEARCH EXPERIENCE

Assessing the Role of Spatial Resolution on Climate Modeling **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

Assessing Wildfire Impacts on the Mountain Bluebird's Migration Patterns **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

CAMPUS INVOLVEMENT

American Society for Photogrammetry & Remote Sensing, Social Media Coordinator **Aug 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 Dawgs, Student Meteorologist **Aug 2024 - May 2025**

- Published weather forecasts, created weather visualization graphics with WSI Max Software, and managed OBS Studio to ensure smooth delivery of live weather segments

Weather Research and Forecasting (WRF) Team, Statistical Analyst **Aug 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