

EMILY RICHARDSON

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SKILLS

Technology Tools & Languages | ArcGIS Instant Apps, ArcGIS Online, ArcGIS Pro 3.x, ArcGIS StoryMaps, Canva, Git/GitHub, Google Maps, Microsoft Office Suite, OpenStreetMap (OSM)

Concepts & Methods | Attribute data entry, cartography and visualization, feature creation and editing, metadata creation and management, spatial analysis, spatial statistics, statistical analysis

Soft Skills | Active listening, adaptability, communication, critical thinking, problem-solving

EXPERIENCE

Virtual Federal Student Service (US Forest Service)

Sept 2024 – Present

GIS Mapping & Research Intern

- To date, digitized **1,300+** historical cemeteries across **~3,000** square miles in **6** Kentucky counties from USGS topographic maps in ArcGIS Pro
- Utilized publicly available data (Google Maps, OpenStreetMap, Find a Grave, county historical society records) to identify and document **750+** cemeteries and their attributes prior to field verification
- Recommended contacting Ancestry for Find a Grave data, facilitated the request, and processed the dataset for integration into ArcGIS Pro, reducing manual searches by **60%+**
- Proposed the use of Google Maps Street View and parcel data, identifying **13%** of previously unknown cemeteries
- Leveraged AI to develop Python code and an ArcGIS Notebook for GIS workflow optimization, including task automation

Digital Atlas of Illinois (Western Illinois University)

Jan 2024 – May 2024

Historical Geography Team Member

- Collaborated with peers to create historical maps using ArcGIS Online, contributing to the development of an interactive Illinois state atlas in partnership with Illinois State University and Southern Illinois University at Edwardsville

Humanitarian OpenStreetMap Team

Apr 2023 – Present

Volunteer Mapper

- Digitize features (buildings, roads, and other aspects of critical infrastructure) to support humanitarian missions, disaster relief, and community development

EDUCATION

Western Illinois University

Dec 2024

Bachelor of Science: Mathematics & Geographic Information Science

Minor: Geology

- **Awards:** Norman and Carmelita Teeter Undergraduate Research Award & Grant for honors thesis on *Spatially Adjusted Correlations Between Crime and Topographic Variables*

Selected Projects

- **Historical Burial Sites of Rockcastle County, Kentucky (1810–2020):** An interactive ArcGIS Instant App exploring 210 years of cemetery development in Rockcastle County, Kentucky.
- **Hydrological Proximity Influences on Sink Area Coverage:** A Geographically Weighted Regression (GWR) analysis with model significance, goodness-of-fit, and prediction map evaluation