

## Professional Employment

### United States Army Corps of Engineers, Jacksonville District

#### *Geospatial Software Developer – Cartographer (11/2015-present)*

- Act as the lead developer for the U.S. Army Corps of Engineers (USACE) Regional Sediment Management Regional Center of Expertise (RCX) developing custom data entry and geovisualization web applications used by USACE Districts in the South Atlantic and North Atlantic Divisions (one of the applications was nominated for and honored with the USACE Innovation of the Year Award).
- Contribute to the development team creating the new CorpsMap3 software platform for geospatial web applications by assisting with user experience design reviews and submitting design specifications documents for user interface themes.
- Collaborate with members of the USACE Modeling, Mapping, and Consequences Production Center to update the national inundation database schema and develop the National Structures Inventory Database data download tool (a highly interactive web application serving USACE and the Federal Emergency Management Agency).

### United States Geological Survey, Grand Canyon Monitoring and Research Center

#### *Geographer (10/2014 – 11/2015)*

- Author custom static and data-driven web pages and web applications using HTML, CSS, and JavaScript (including various web mapping libraries).
- Write and update Python scripts utilizing the arcpy Mapping module to generate custom river atlases for field personnel and author tools and toolboxes for common Grand Canyon Monitoring and Research Center (GCMRC) GIS tasks.
- Publish ArcGIS Server REST services to be consumed by the public and custom GCMRC web applications.

### United States Army Corps of Engineers, Jacksonville District

#### *Cartographer (08/2013 – 10/2014)*

- Rapidly author maps and atlases as needed while organizing and publishing spatial data as REST service endpoints.
- Write SQL statements updating spatial and non-spatial tables in PostgreSQL database.
- Develop custom python scripts to automate geoprocessing tasks including programmatically generating flood wave profiles based on numerical modeling outputs for inclusion in emergency management map atlases.
- Adhere to standard operating procedure for national program developing flood inundation atlases.
- Process LiDAR data and edit 3D break lines to produce ESRI terrain datasets and digital elevation models.

### South Carolina Department of Natural Resources, Marine Resources Research Institute

#### *Wildlife Biologist II (03/2013 – 08/2013)*

- Maintain statewide geodatabase of oyster reefs and shellfish harvesting permit areas and produced statewide map series of permitted shellfish resource management areas for customers, recreational fishing license holders, and law enforcement.
- Develop map series automation techniques using ArcGIS and Python to reduce time of map production.
- Mentor undergraduate intern in the application of geospatial technology to natural resource management.

### University of Georgia, Marine Extension Service

#### *GIS Project Manager (11/2007 – 07/2010)*

- Supervise multiple projects and coauthored technical reports to funding agencies.
- Train field personnel in GPS data collection and supervised lab technicians in GIS and remote sensing analysis.
- Made GIS hardware and software recommendations to GIS Lab Coordinator and maintained GIS software installations.
- Aid in development of oyster reef inventory collection procedures and database management (including programming custom data entry forms for ESRI ArcPad with Visual Basic) and managed geodatabase of wetland habitat data.

#### *GIS Technician (03/2005 – 10/2007)*

- Perform aerotriangulation and orthorectification of aerial photography.
  - Update historical invasive species and water quality geodatabases through archival research and heads-up digitizing.
  - Create maps for print (posters, academic journals) and interactive web maps using the Google Maps API.
  - Digitize training sets and performed accuracy assessment for automated feature extraction remote sensing technique comparison using Feature Analyst and eCognition.
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## Education & Certification

### Georgia Institute of Technology

*M.S. in Computer Science*, Matriculation: 01/2018 GPA: 4.00/4.00

### The University of Georgia

*Ph.D. in Geography*, Matriculation: 08/2011, Withdrew: 01/2013 GPA: 3.94/4.00

*M.S. in Geography*, Matriculation: 08/2009, Graduation: 08/2011 GPA: 4.00/4.00

*B.S. in Geography (Certificate in GIS and Geology minor)*, Matriculation: 08/2003, Graduation: 12/2007 GPA: 3.45/4.00

### GIS Certification Institute

GIS Professional – Certification Number: 90520 (03/2015 – 03/2020)