

Thomas Harner

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EDUCATION

Master of Science, Geographic Information Systems (GIS) and Web Map Programming
University of Wisconsin-Madison
Expected Graduation May 2018, 4.0 GPA

Bachelor of Science, Geographic Science
James Madison University, May 2015, 3.77 GPA
Concentration in Applied Geographic Information Systems, minor in Computer Information Systems (CIS)

SOFTWARE & PROGRAMMING

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|-------------|---------------------------|-------------------------|------------------|
| ArcGIS 10.5 | ArcGIS Pro 2.0 | PgAdminIII (PostgreSQL) | FME 2017 Desktop |
| QGIS 2.18 | Trimble Pathfinder Office | Adobe Illustrator | Git |
| Python 2.7 | Java 8 | PostgreSQL | SQLite |
| JavaScript | HTML | CSS | R |

WORK EXPERIENCE

July 2015–present | Geographer, U.S. Army Corps of Engineers, Geospatial Research Laboratory, Alexandria, VA

Work with geospatial programming libraries to build optimized data storage solutions for military-based routing systems and Helicopter Landing Zones (HLZs). Developing a customized API that uses geospatial data to build attributed Triangulated Irregular Networks within GeoPackage databases for off-road routing and HLZ selection.

March 2014–May 2015 | GIS Technician, Page County Government, Luray, VA

Performed data integrity checks and refined parcel data using coordinate geometry tools. Designed and distributed cartographic products in response to citizen requests.

May 2014 – August 2014 | GIS Specialist, CACI International, Charlottesville, VA

Standardized interior space data for military facilities. Conflated CAD and GIS data using custom Python tools to correct attribution, fix geometric errors, and produce new geodatabases of converted CAD floor plans. Analyzed oblique imagery to verify ambiguous features in CAD floor plans.

TECHNICAL SKILLS

- **Spatial Database Administration:** Conduct spatial database schemas for storing and editing data using PostgreSQL and SQLite.
- **Geospatial Development:** Simplify geospatial workflows using GDAL/OGR bindings, Java Topology Suite, and ArcPy module.
- **Spatial ETL Tools:** Use FME Desktop to automate the conversion of non-conventional data formats (Building Information Modeling) for use in GIS software.
- **Web Mapping:** Develop and publish responsive web maps documenting temporal and comparative map content using Leaflet, ESRI, and MapBox APIs.
- **OpenStreetMap:** Script development to parse OpenStreetMap data to analyze its attribution and store it in database formats for simplified, integrity-based editing.
- **ArcGIS Online:** Publish cartographic products, geospatial data, and web maps to the ArcGIS Portal.
- **Enhanced Cartographic Design:** Export maps and geospatial data to Adobe Illustrator and Photoshop for further enhancement and refinement.
- **Git:** Handle merge conflicts, and push/pull code changes to contribute to team development repositories.
- **GPS:** Use Trimble Global Positioning System (GPS) units to collect and perform differential correction on data.