Thomas Harner

Thomasharner92@live.com
(301) 980-1535

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EDUCATION

Master of Science, Geographic Information Systems (GIS) and Web Map Programming
University of Wisconsin-Madison
Expected Graduation Fall 2019, 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

ArcGIS 10.6	ArcGIS Pro 2.0	PgAdminIII (PostgreSQL)	FME 2017 Desktop
QGIS 3.0	Jupyter Notebooks	Adobe Illustrator	Git
Python 2/3	Java 8	PostgreSQL	SQLite
JavaScript	HTML	CSS	GeoServer

WORK EXPERIENCE

March 2019–present | Platform Configuration Engineer, Embedded Alliance, Springfield, VA

- Worked as a member of the Mission Support team for Enhanced Analytic Environment contract with National Geospatial Intelligence Agency.
- Engaged with offices as an embed for several week intervals to train analysts on identifying improved workflows for data cleanup, documentation and migration to an ArcGIS server environment using Feature and Map services.
- Built custom python scripts for offices to parse and store spatial reporting data from RSS feeds. Scripts were used to dynamically populate a live Common Operating Picture via an ArcGIS map service.

July 2015–March 2019 | Geographer, U.S. Army Corps of Engineers, Geospatial Research Laboratory, Alexandria, VA

- Worked with geospatial programming libraries to build optimized data storage solutions for military-based routing systems and Helicopter Landing Zones (HLZs).
- Helped develop a customized API that uses geospatial data to build attributed Triangulated Irregular Networks within GeoPackage databases for off-road routing and HLZ selection.
- Served as team SME for extracting and editing OpenStreetMap data for routing-based applications.

GRADUATE PROGRAM PROJECT EXPERIENCE

- **Cancer Nitrate Java Web Application:** Allowed for a user to examine the relationship between nitrate concentration and cancer rate throughout the state of Wisconsin. Created backend Java library to interpolate a surface of predicted nitrate values based on front-end user input. Output was shared via hexbins using vector tiles published from GeoServer using the OpenLayers API, and analysis was performed using aggregate PostgreSQL functions.
- **State Park Tourism Web Application:** Created Web Application that handled the querying, filtering, and editing of state park-based trails and campground data using WFS services. Served the layers out from PostgreSQL using GeoServer and used OpenLayers to generate server requests for attribute and filtering changes for the data sources.