

**SHANNON HORWITZ**  
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## **EXPERIENCE**

### **GIS PROGRAMMER/ANALYST** **LOUDOUN COUNTY GOVERNMENT**

Leesburg, VA  
11/2019–PRESENT

- Provides programming and scripting solutions for tabular or geographic data extraction, manipulation, translation, analysis, and Quality Control (QC).
- Researches, evaluates, and recommends new technologies to develop, implement, and maintain complex custom GIS applications for Loudoun County Departments.
- Improves data processes within the Enterprise GIS, as well as monitors systems, data, and processes.
- Resource for implementation of new Enterprise Land Management System.
- GIS trainer for employees utilizing new Enterprise Land Management System.
- Resource for New Employee Onboarding.
- Experience using Python, ArcGIS API for Python, ArcGIS Online, ArcGIS Pro, ArcGIS Enterprise, ArcGIS Notebooks, ArcGIS Web AppBuilder.

### **SENIOR GEOSPATIAL ANALYST** **DEWBERRY**

Fairfax, VA  
08/2018–10/2019

- Produced LiDAR Breakline features used to re-enforce shorelines in Digital Elevation Models (DEM) by analyzing Light Detection and Ranging (LiDAR) Intensity and derivative ground surface models such as a Triangular Irregular Networks (TIN).
- Extracted Feature Data of both natural and man-made features tactically significant in urban areas Outside the Continental United States (OCONUS).
- Created and updated Standard Operating Procedures (SOPs) for Feature Data extraction, Spatial Database Engine (SDE) set-up, training, and production work to comply with Quality Management System (QMS) protocol for Urban Tactical Planner (UTP) project.
- Acted as the Database Administrator for trouble-shooting and initial setup of UTP Structured Query Language (SQL) SDE Databases.
- Compiled materials from federal government agencies and divisions of the military to conduct and host Federal Emergency Management Agency (FEMA) Remote Sensing Calls during National Disasters, allowing for efficient data acquisition.
- Classified LiDAR points according to project specifications to mitigate artifacts in DEMs.
- Collaborated with Geospatial Analysts for input regarding guidance, problem solving, troubleshooting, tool utility, and ways to increase efficiency.

### **GEOSPATIAL ANALYST** **LEIDOS**

Alexandria and Chantilly, VA  
09/2014–08/2018

#### *Airborne Integration and Ground Division (Alexandria, VA) – Army Buckeye Program*

- Collected raw GPS/IMU (Global Positioning System/Inertial Movement Unit), LiDAR (Light Detection and Ranging), and EO (Electro-Optical) Mission data as a Sensor Operator during 4-month rotational Outside the Continental United States (OCONUS) deployment.
- Downloaded, processed, and analyzed tactical imagery/LiDAR data to validate proper collection during TOT (Time On Target).
- Created accurate trajectory files in POSpac MMS importing data from Applanix POS AV integrated GNSS/Inertial system; these SBET (Smoothed Best Estimate Trajectory) files in TwoEye software create Digital Surface Models, Digital Terrain Models, .LAS and .LAZ points (WGS-84 and EGM08).
- Merged Raster Digital Terrain Models (DTM) necessary for aerial triangulation in VisionMap software.
- Determined flight lines and adequate data coverage necessary for deliverable target areas.
- Conducted Quality Assurance/Quality Control (QA/QC) to ensure accurate and reliable product.
- Employed knowledge of Vector and Raster manipulation to fix imagery where inaccurate aerial triangulation.
- Ensured quality data management through file structure standardization and processing log, facilitating project status communication to team.
- Formatted and converted data into deliverable product per customer requirement using software BulkRename, GeoExpress, and OSGeo4W shell.

- Troubleshooted hardware and software ArcGIS Software Suite (ArcMap, ArcCatalog), QGIS, QT Modeler, Global Mapper, VisionMap Software Suite (FlightViewer, LightSpeedManager, Preprocessor, DataViewer, AppControlCenter), POSPac, TwoEye.

#### *Spatial Technologies and Concepts Division* (Chantilly, VA) – Digital Nautical Charts Program

- Experienced in Vector Product Format GeoDatabase Editing, Production Mapping, Conversion, Digitization, and Topology tools used in ArcGIS software.
- Subject Matter Expert/Technical Lead for monthly Continuous Maintenance (CM) deliveries for 2 assigned Digital Nautical Chart (DNC) geographic regions (CONUS West, Antarctica).
- Translated, queried, and downloaded Notice to Mariners (NtMs) for assigned DNC regions from assorted countries' Hydrographic Office sites.
- Ingested and analyzed US Coastguard Light List Corrections for five geographic regions and updated SQL tables to administer updates to DNC team.
- Georeferenced Open Source Nautical Charts and charts provided by a US Government customer requiring special access.
- Verified features, attribution, and collection for required updates according to Standard Operating Procedures (SOP) for safe Maritime Navigation.
- Validated Geospatial Nautical data by performing multiple rounds of Quality Control for product delivery.
- Obtained SECRET Security Clearance.

### **ISO 9001 COMPLIANCE LEAD**

#### **LEIDOS**

- Served as International Organization for Standardization (ISO) Representative implementing Quality Management System and verifying employee adherence through project-specific auditing, audit report writing, document review, and document editing as part of contract requirement.
- Conducted Management Reviews with Top Management reporting on implementation of Quality Management System.
- Served as Document Control Manager for all Unclassified Source material entering and leaving the Spatial Technologies and Concepts Division.

### **EDUCATION**

- B.S. in Geographic Science with a Minor in Geology – 12/15/2012  
James Madison University, Harrisonburg, VA
- M.S in Online GIS Development – In progress (online program)  
University of Wisconsin-Madison, Madison, WI

### **AWARDS**

- 2023 Silver Award– EMPACT (Employee Achievements & Contributions to Loudoun County)
- 2022 Multi Department Silver Award – EMPACT (Employee Achievements & Contributions to Loudoun County)
- 2022 Silver Award– EMPACT (Employee Achievements & Contributions to Loudoun County)
- 2018 Advanced Solution Group Leadership Team Award Program (Leidos Advanced Solution Group Quarterly Employee Recognition)