**Experience Summary**

Timothy O’Leary is a TS/SCI-cleared geospatial analyst and web applications developer with 6 years of professional experience, including Python/ArcPy and Shell scripting, PostgreSQL database management and working on distributed (cloud-based) geospatial processing projects. Mr. O’Leary’s expertise includes developing GIS Rich Internet Applications using Adobe Flex; OpenStreetMap API; Ruby on Rails; ArcGIS Web Application Programming Interface (API); ArcGIS Viewer for Flex; ArcGIS Online Web Maps; and XML.

**Professional Experience**

**Geospatial Analyst, DigitalGlobe, Herndon, VA**

June 2012—Present

⦁ Currently assigned to implementing, managing, and upgrading a copy of our Open Source software stack on the client site in an Amazon Web Services Environment. Working with technologies such as AWS Management Console, python, ogr2osm, osm2pgsql, osmosis, Nominatim geocoder, OpenStreetMap Web API, iD Editor, Ruby on Rails, AWS command line, redmine, and github.

⦁ Currently assigned to continual assistance in management and implementation of new software capabilities to our Open Source software stack on our client site. Working with technologies such as python, ogr2osm, osm2pgsql, osmosis, Nominatim geocoder, OpenStreetMap Web API, iD Editor, Ruby on Rails, redmine, and github.

⦁ Previously assigned to the implementation of geocoding across multiple data sources. Working with technologies such as python, ogr2osm, osm2pgsql, osmosis, Nominatim geocoder, OpenStreetMap Web API, iD Editor, and Ruby on Rails.

⦁ Previously assigned to a project to implement an offline geocoding solution to the OpenStreetMap website. Integration of software on government customer high-side environment and management of software for addition of further added features using Ruby on Rails.

⦁ Previously assigned to a research project funded by IARPA that uses map algebra for distributed (cloud-based) geospatial processing. Write Python/ArcPy scripts for batch image processing and batch queries of CSV files in this system that uses Hadoop to save processing time and Geospatial Data Abstraction Library (GDAL) for tasks including raw data processing, mosaicking, and vector/raster data preparation.

**Geospatial Analysis Intern, Marine Corps Intelligence Activity, Quantico, VA**

May 2011—August 2011 and December 2011—January 2012

⦁ Trained alongside both government civilians and active-duty Marines to

create compound maps directly supporting current operations in Afghanistan

⦁ Perform map production using various techniques including versioned editing, feature creation, cartographic representation via PLTS Grid Manager, data management, and quality control

⦁ Perform map dissemination tasks including data conversion to multiple formats and positioning files and products for distribution to end users

**University Projects**

August 2010—May 2012

⦁ Conducted a Wi-Fi density analysis mapping project using desktop, server, mobile, and web GIS technologies to collect, analyze, and visualize Wi-Fi Internet coverage across the Virginia Tech campus and downtown area. Collaborated with campus IT staff on project. Presented project results and demonstrated web application built using ArcGIS Viewer for Adobe Flex to peers and professor.

⦁ Used ArcGIS Desktop to perform interactive selection of ArcMap features, joining external attribute files to tables, map symbolization and event (X,Y) files, attribute queries and location queries, heads up screen digitizing, address geocoding, spatial joins, report and classification of data, vector spatial analysis techniques, and raster analysis in ArcGIS.

⦁ For a remote sensing lab project, used ERDAS Imagine software to perform image registration, image research, supervised and unsupervised image classification, spatial enhancement, spectral enhancement, image enhancement, and change detection. Analyzed a variety of imagery products including: Synthetic Aperture Radar, Thermal Infrared, Color Infrared, LANDSAT, and LiDAR.

⦁ For a spatial data analysis project, conducted individual research studying patterns and trends of crime in the District of Columbia. Performed hot spot density analysis using current crime data and individual research to explain trends discovered in the analysis.

**Education**

Bachelor of Arts, Geography – Geospatial Analysis; Virginia Polytechnic Institute and State University, Blacksburg, VA, 2012

**IT Skills**

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| --- | --- | --- | --- | --- | --- |
| **Skill** | **Expertise** | **Years** | **Skill** | **Expertise** | **Years** |
| Devops | Novice | 1.5 | OpenStreetMap | Intermediate | 2.5 |
| Python | Novice | 1.0 | Nominatim Geocoder | Intermediate | 2.5 |
| ArcGIS (9.x & 10.x) | Advanced | 3.0 | Ruby on Rails | Novice | 2.0 |
| Open Source Software Development | Intermediate | 2.0 | AWS Command Line | Novice | 0.5 |
| Postgresql/MySQL/Sqlite3 | Intermediate | 3.5 | osm2pgsql/osmosis | Intermediate | 2.5 |

**Technical Specialties**

|  |  |
| --- | --- |
| AWS Server Management & implementation | Geodatabase Management & Design |
| Desktop, server, and web GIS | GIS Data Management & Implementation |
| Spatial Analysis | DevOps |
| Postgresql Database Management & Implementation | Open Source Software Development & Implementation |
| Coordinate Systems & Map Projections | Raster Manipulation & Analysis |
| Nominatim Geocoding | Vector Data Ingest & Implementation |

**Proposed Labor Category:** Programmer 1