

JONATHAN WITCOSKI

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Location: DC metro area · previously Reston, VA

Senior GIS Developer with 15+ years building enterprise ArcGIS web applications, spatial databases, and automated geospatial workflows for federal agencies and utilities. Strong match for ArcGIS Enterprise/Online/Pro, Python, JavaScript, SQL, SQL Server, PostgreSQL/PostGIS, and REST API development.

TECHNICAL SKILLS

GIS: ArcGIS Enterprise, ArcGIS Online, ArcGIS Pro, ArcGIS API for JavaScript, Spatial Analyst, raster analytics

Development: Python, R, JavaScript, SQL, REST APIs, web services

Data: SQL Server, PostgreSQL/PostGIS, GeoParquet, PMTiles, spatial ETL, geospatial data formats and standards

Cloud & ops: AWS, Azure, Docker, Jenkins, GitLab, CI/CD

EXPERIENCE

Geospatial Engineer | INCATech

Northern Virginia | 2026 – Present

- Design, build, and maintain enterprise geodatabases and geospatial workflows with ArcGIS Enterprise, Online, and Desktop for IC and USPIS missions
- Automate spatial analysis, data validation, and ETL with Python and SQL across Oracle, SQL Server, and PostgreSQL
- Produce web maps and visualizations, and support GIS users with troubleshooting, migrations, and documentation

Founder | Vector Scope AI LLC

Remote | October 2025 – Present

- Build ArcGIS-connected web tools and Python pipelines for map editing, validation, and data extraction
- Ship Global Ski Atlas (3,000+ ski areas) as a live JavaScript web mapping demo with automated ETL

Geographer | DRT Strategies (CDC)

Remote | March 2022 – 2026

- Develop web mapping applications and dashboards with ArcGIS Enterprise, ArcGIS API for JavaScript, JavaScript, React, and Power BI for CDC surveillance programs
- Use R and Python to build automated workflows for raster and vector data extraction, producing PMTiles and GeoParquet datasets that feed dashboards and web maps
- Build SQL Server and PostgreSQL/PostGIS databases and Python/SQL ETL pipelines for recurring geospatial updates

GIS Data Engineer & Scrum Master | Saicon (National Grid)

Remote | May 2021 – March 2022

- Migrated large utility GIS datasets to cloud-hosted ArcGIS Enterprise using Python and SQL
- Led Agile delivery of migration milestones and spatial data quality checks

Geographer | U.S. Census Bureau

Suitland, MD | November 2016 – March 2021

- Developed Python tools and ArcGIS API workflows for census geography production across large national datasets
- Automated spatial and raster processing workflows using ArcGIS Spatial Analyst

GIS Systems Administrator & Software Engineer | C2 Solutions Group Inc.

Reston, VA | May 2014 – November 2016

- Administered ArcGIS Server and Portal deployments backed by SQL Server for federal clients
- Built secure web mapping applications used by hundreds of concurrent users

Geospatial Analyst | Booz Allen Hamilton (DHS/FEMA)

Philadelphia, PA & Arlington, VA | October 2009 – May 2014

- Built maps, spatial analysis workflows, and web GIS tools for FEMA and DHS disaster response
- Processed and analyzed raster and imagery datasets to support situational awareness during major disaster operations

Earlier Roles

GIS Solutions Developer, Tyco Telecommunications (2007–2009) · GIS Analyst, WDG Location Consulting (2007) · GIS Specialist, Philmont Scout Ranch (2007)

PROJECTS

Global Ski Atlas — Web GIS with Python ETL and JavaScript mapping (globalskiatlas.com
(<https://globalskiatlas.com>))

Cloud Resume Challenge — AWS-hosted application with IaC, REST APIs, and CI/CD (witcoskitech.com
(<https://witcoskitech.com>))

EDUCATION & CERTIFICATIONS

Master of Science in Geography — University of Tennessee, Knoxville (2007)

Bachelor of Arts, Geography and Anthropology — Penn State University | Minor in GIS

AWS Certified Cloud Practitioner (2021)