NAT ZIEMECKI

Website: github.com/nziemecki | natziemecki@gmail.com | Cell: 302-605-2398 | Philadelphia and NYC

Summary

Spatial Data Engineer Specializing in Backend Solutions and Automating Data Pipelines

Education and Training

Temple University | Philadelphia, PA - *2024*
Professional Science Master's in Geographic Information Systems

Temple University | Philadelphia, PA - *2023*
Graduate Certificate in Geographic Information Systems

University of Delaware | Newark, Delaware - *2018*
Bachelor of Science in Biosciences (Pre-Med/Pre-Vet track) *Cum laude*
Bachelor of Science in Agriculture and Natural Resources
  ● Minor in Wildlife Conservation

AWS Certified Cloud Practitioner (CLF-C02) — In progress

Tools & Skills

Languages: Python, SQL, R; familiar with JavaScript, HTML/CSS

Data Engineering: dbt, Apache Airflow

Containerization & DevOps: Docker, Docker Compose, Git, GitHub PR workflows, CI/CD pipelines (GitHub Actions)

Geospatial: ArcGIS Pro, QGIS, GeoPandas, ArcPy, Rasterio, PostGIS, GDAL Tools, Leaflet.js

Cloud & Infrastructure: AWS, Linux, Bash/zsh

Databases: SQL Server, PostgreSQL/PostGIS, DuckDB, SQLite, Snowflake (exposure)

Database Tools: SSMS, DBeaver

Machine Learning: R packages: xgboost, randomForest

Visualization: Tableau, ArcGIS Online Apps and Dashboards, matplotlib, ggplot

Experience

OpenDataPhilly (City of Philadelphia Open Data Portal) | Philadelphia, PA
Open Source Contributor/Programmer
08/2024-present
- Contribute to an open-source project focused on improving data accessibility in Philadelphia
- Led a project to enhance OpenDataPhilly's search functionality by automating a metadata enrichment and extraction pipeline for externally hosted datasets
- Integrated spatial data from GeoJSON files into a PostGIS database using GDAL tools for format conversion and import automation
- Automated spatial joins to associate datasets with administrative boundaries, enabling advanced filtering and search capabilities
- Deployed solution locally using Docker; prepared for CI/CD integration with GitHub Actions

Philadelphia Water Department | Philadelphia, PA
Environmental (Data) Scientist- Lead and Copper Rule Inventory & Research Team
05/2025-08/2025
- Automated SQL-to-spatial ETL workflows using Python and T-SQL.
- Conducted EDA and created reports for assessing data source accuracy.
- Provided analytical reporting that supports the City of Philadelphia's Lead and Copper Rule Improvements (LCRI) program.
- Created ArcGIS Online workspace for the LCRI group, published and maintained ArcGIS apps and interactive maps.

Philadelphia Water Department | Philadelphia, PA
Graduate Data Analyst Intern
10/2023-03/2024
- Supported effective infrastructure decision making by spearheading a spatial data creation, transformation and analysis project.
- Initiated investigative data analyses using R and Python to find meaningful patterns in data discrepancies.
- Utilized advanced data skills to summarize sampling results, highlighting key trends for daily state reporting compliance.
- Facilitated the conversion and upload of field instrument data into the Laboratory Information Management System (LIMS) database, ensuring adherence with the specified format standards.

U.S. Forest Service | Idaho & Oregon
Biological Science Technician (Wildlife, Fuels, Silviculture)
05/2018-11/2019
- Analyzed spatial data for project proposals and forest road planning based on usage and condition.
- Structured and entered field data into databases for downstream analysis and reporting.
- Designed and conducted habitat surveys in old growth stands focusing on sensitive wildlife species.
- Led northern goshawk nest surveys, ensuring compliance with NEPA standards.
- Tracked survey progress and optimized data collection routes for efficient fieldwork.