ANDREW W. ROSS, MSc.

Data Engineer

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SUMMARY

Highly motivated Data Engineer with over 9 years of experience in Python, SQL, and data processing. Demonstrated professional experience building data pipelines and developing REST APIs. Proven ability to work independently while collaborating effectively with a team to design, develop, and deploy data-driven solutions.

SKILLS

Python:	Data processing with Pandas, Numpy, Scikit-learn
	Develop ETL pipelines
	Proficient in Jupyter notebooks
	Test-Driven Development with Pytest
	API development with FastAPI
SQL:	PostgreSQL - complex SQL queries, stored procedures, and functions
Cloud architecture:	AWS Certified Cloud Practitioner Certification
	Azure Fundamentals Certification
	Docker containerization setup and management
	Terraform IaC
Technical proficiencies:	GIT version control - code management, collaboration
	Linux & bash

EXPERIENCE

Congruex   San Diego, CA
Spatial Data Engineer   June 2020 - Current

- Pioneered and deployed containerized API Docker infrastructure to expand functionality of maps for individual projects and departments, consisting of 19 endpoints written in Python FastAPI on Azure, providing geospatial analysis, reporting, and data management

- Engineered data analysis in Python with Jupyter, GeoPands, and scikit-learn increasing access to corporate spatial data warehouse for telecomunications project managers

- Provided end-user support and training to technical and non-GIS users of corporate web-mapping platform

- Dramatically improved speed and efficiency of support staff tasks by instituting standardized workflows, and deploying tools and automations for data management, quality control, and system maintenance utilizing Jupyter notebooks in Python

- Established reporting infrastructure to provide geospatial reports and analyses on scheduled basis to support project management and administrative business processes, deployed on Azure with Docker and Python

- Reduced time to create tools and services by developing Python library to automate the configuration and management of mapping platform comprising over 7000 lines of code

- Created Python-based ETL workflow to consolidate geospatial data from partner organizations processing over 6.5 million features per day with containerized infrastructure on Azure

Freelance   San Diego, CA
Data Analyst Consultant   January 2019 - May 2020

- Developed and deployed targeted surveys providing insights into customer engagement and product utilization
- Improved results by working closely with clients to deeply understand their needs and requirements
- Increased scale and analysis turnaround by automating end-to-end process to verify, clean, consolidate and analyze data in Python
- Improved depth of analysis by incorporating concomitant datasets and creating reporting pipeline in Python

BC Transit   Victoria, Canada
Data Analyst   January 2013 - October 2018

- Deployed reporting and analysis system, built with Python and Jupyter notebooks, processing 150,000+ transactions per day from a fleet of 700+ vehicles providing detailed insights into transport ridership patterns
- Developed performance metrics system to monitor security and quality of regional reporting systems improving alerting and notification of farebox security incidents and technical problems
- Created continuous monitoring system with multiple departments ensuring uninterrupted stream of ridership data
- Performed statistical and spatial analysis on ridership data for administrative and planning departments, preparing reports and summaries in ArcGIS, directly supporting decision making for the management and planning of the transit network
- Managed continuous updates and integration of data into the corporate spatial data warehouse with Python
- Received the 2015 corporate Recognizing Excellence and Values award for helping to create a cross-departmental team that significantly improved transit vehicle farebox data collection
- Developed performance metrics system in Python to monitor security and quality of regional reporting systems

EDUCATION

Queen's University   Kingston, Canada
Master of Science, Computer Science

University of Ottawa   Ottawa, Canada
Graduate Diploma, International Development

Queen's University   Kingston, Canada
Bachelor of Science, Psychology & Computer Science