

Adam Acovski

Denver, Colorado, United States

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SUMMARY

Hydrogeological engineer specializing in groundwater modeling, contaminant transport analysis, and automation-driven workflows. Combines technical expertise in numerical modeling with modern software engineering practices to deliver scalable, reproducible analyses. Experience spans mining consulting with focus on dewatering assessments, uncertainty quantification, and model calibration.

TECHNICAL SKILLS

Modeling & Simulation: MODFLOW, flopy, FEFLOW, MINEDW, SEEP/W, ModelMuse, Groundwater Vistas, PEST

Programming & Data Analysis: Python (Pandas, NumPy, SciPy), C++, Rust, SQL, Excel

Visualization: Matplotlib, Seaborn, PyVista, Plotly/Dash

GIS: QGIS, spatial-temporal data integration

Databases: PostgreSQL

DevOps & Infrastructure: Docker, CI/CD pipelines, Git, AWS S3, infrastructure automation

Machine Learning: Scikit-learn, PyTorch, RAG frameworks

EXPERIENCE

ITASCA Consulting — Project Hydrogeologist

July 2024 – Present (1 year 4 months)

Lakewood, Colorado, United States

- Automated groundwater modeling pre-processing and post-processing workflows, reducing manual effort and improving project reproducibility
- Built scalable data processing pipelines for spatial-temporal monitoring datasets
- Developed Python-based interactive dashboards for decision support and investigations
- Containerized environments with Docker for deployment to VPN-accessible servers
- Established CI/CD pipelines with unit testing to prevent regressions during script refactoring
- Automated technical documentation deployment to AWS S3 for version-controlled distribution

SNC-Lavalin — Groundwater Modeller

November 2012 – April 2020 (7 years 6 months)

Saskatoon, Saskatchewan, Canada

- Optimized well field configurations for brine disposal into the Winnipeg–Deadwood formation using analytical and numerical simulations with fracture gradient modeling
- Calibrated complex hydrogeological models using PEST for parameter estimation for predictive simulation
- Developed custom FEFLOW plug-ins in C++ for geological modeling and mesh generation, including shapefile import with Delaunay triangulation constraint handling
- Performed particle-tracking simulations for uranium mine decommissioning to assess contaminant migration and inform remediation strategies
- Authored technical reports translating complex modeling results for Environmental Impact Assessments (EIAs)
- Designed, built, and maintained custom HPC workstations optimized for simulation applications
- Managed procurement of hardware, software, and networking equipment for cost-effective technology solutions

EDUCATION

University of Waterloo

Bachelor of Applied Science (BASc), Environmental/Environmental Health Engineering
2007 – 2012

PROJECTS

Pathfinder 2e RPG Game

November 2021 – Present

- Designed and implemented complex game systems using Entity-Component-System (ECS) architecture in Rust/Bevy
- Built procedural generation pipelines using Voronoi diagrams and Perlin noise for terrain, with AI pathfinding for NPCs
- Optimized system performance and scalability for large, dynamic game worlds

CERTIFICATIONS

MSHA (Mine Safety and Health Administration) Training