Adam Acovski

Denver, Colorado, United States

adacovsk@gmail.com — LinkedIn — GitHub — GitHub (alt)

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

Cloud & Infrastructure: GCP, AWS, Pulumi, Docker
Programming: Python (Pandas, NumPy, SciPy), Rust, C++, SQL, Git
Data Engineering: ETL/ELT pipelines, PostgreSQL, spatial-temporal data processing
Visualization & Dashboards: Plotly, React, Matplotlib, PyVista
Machine Learning: Scikit-learn, PyTorch, RAG frameworks
Domain: MODFLOW, flopy, FEFLOW, PEST++, IES (iterative ensemble smoother), QGIS

EXPERIENCE

ITASCA Consulting: Project Hydrogeologist

July 2024 – Present (1 year 6 months)
Lakewood, Colorado, United States

- Deployed client-facing dashboards on GCP Cloud Run with IAP authentication for secure access
- Built end-to-end data pipelines from Cloud SQL databases to interactive React/Plotly visualizations
- Provisioned cloud infrastructure using Pulumi for reproducible, version-controlled deployments
- Automated ETL workflows for spatial-temporal monitoring datasets with scheduled data ingestion
- Containerized applications with Docker for consistent development and production environments
- Established CI/CD pipelines with automated testing for reliable deployments
- 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

Independent Work

April 2020 – July 2024
- Managed options portfolio full-time using theta decay strategies
- Contributed to open-source multiplayer game server codebase

Pathfinder 2e RPG Game

July 2024 – 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