TAMARA DOWIS
SOFTWARE ENGINEER
LinkedIn | tamara.dowis@proton.me | GitHub

Software engineer who builds backend systems, APIs, and data pipelines in Python, TypeScript, and Ruby. I like working close to the mechanics of a system, especially when something breaks and I need to trace it back to the underlying behavior. I'm comfortable owning work from early exploration through implementation, including design tradeoffs, testing, and iteration as requirements evolve. Before software, I worked internationally in education and community programs, which shaped how I collaborate, communicate, and design systems that hold up under real-world constraints.

TECHNICAL SKILLS

Languages: Python, TypeScript, Ruby, JavaScript ● **Tooling**: Git, Postman, Swagger, Jira, Confluence
Testing: RSpec, Jest, Capybara ● **Development Practices:** TDD, debugging, iterative design
Caching and Performance: Redis, node-cache, pagination, analytics queries
Backend and APIs: Node.js, Express, Ruby on Rails, REST API design, authentication
Data and Databases: PostgreSQL, SQL, relational data modeling, ETL patterns
DevOps and Automation: Docker, GitHub Actions, CI pipelines, structured logging, monitoring basics

PROJECTS

govbot (Open States scrapers, data pipelines)
Python | GitHub Actions | Docker | JSON | ETL | Structured Logging | Data Validation
Open-source tooling that addresses a core civic data problem: legislative data is fragmented, difficult to track over time, and often dependent on centralized platforms that may be shut down or abandoned.
● Built automated ETL pipelines that transform Open States legislative data into normalized, append-only JSON artifacts for auditing and long-term analysis.
● Designed reproducible, containerized workflows across jurisdictions and sessions, enabling consistent data ingestion and integration.
● Implemented Dockerized pipelines and GitHub Actions schedules to support repeatable deployments and reliable updates.
● Collaborated with cross-functional civic tech contributors to refine data models and support analytics and public-facing applications.

SciScope
Node.js | Express | PostgreSQL | Objection.js | Redis | Jest | Winston | Passport | JWT | node-cache
A RESTful API for science news aggregation with user authentication, caching, and analytics
● Designed and built a RESTful API using Express.js and PostgreSQL to support authenticated users, caching, and analytics.
● Designed relational data schema and implemented advanced SQL queries with Objection.js, including pagination and analytics.
● Implemented secure authentication and authorization with Passport.js and JWT tokens, including session management and role-based access controls for user data protection.

Adventure Life API
Node.js | TypeScript | Express | PostgreSQL | Knex | Objection.js | Postman | Jest | Swagger
REST API exposing structured, relational city data via modular, testable endpoints
● Built RESTful API with TypeScript and Express, applying the DAO pattern and modular service design to refactor an existing codebase into a clean, scalable backend system.
● Modeled complex city relationships using PostgreSQL and Objection.js, optimizing queries for fast and reliable data access.
● Wrote Swagger documentation and a full Jest test suite to ensure endpoint accuracy and support long-term developer usability.

HIGHLIGHTED PROFESSIONAL EXPERIENCE

Science Educator | International & U.S. Schools   07/2016 - Present
● Designed and delivered inclusive science curricula in IB and project-based environments in Mexico, China, and the U.S., helping students build analytical thinking and real-world problem-solving skills.
● Analyzed student performance data, tested instructional approaches, and iterated on materials based on outcomes, mirroring iterative development and feedback cycles.

Project Manager | SolarAid   07/2008 - 06/2009
● Led a solar energy initiative that distributed over 500,000 lights across Kenya, improving daily life for more than 2 million people.
● Managed a 28-person team across franchise operations and a local manufacturing plant, overseeing planning, logistics, and reporting.
● Worked directly with local communities to understand constraints, translate needs into workable plans, and build systems that supported reliable delivery and long-term adoption.

EDUCATION & CERTIFICATIONS

AWS Certified Cloud Practitioner | Amazon Web Services   07/2025
Back End Engineering Certificate | Turing School of Software Design   06/2022
Bachelor of Science with Honors in Biology Ed | Kennesaw State University   05/2015