TAMARA DOWIS | SOFTWARE ENGINEER

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Software engineer focused on building maintainable backend and full-stack systems in Ruby on Rails, PostgreSQL, and JavaScript. I enjoy working close to application logic and data flow, especially when debugging edge cases, refining business rules, or improving clarity in existing codebases. I collaborate closely with teammates from early design through implementation, contributing to clear abstractions, test coverage, and steady iteration as requirements evolve. I care about building systems that are understandable, resilient, and genuinely useful to the people who rely on them. My background in education and civic work has shaped how I communicate across roles, prioritize real-world impact, and approach software development with care, judgment, and respect for long-term maintainability.

TECHNICAL SKILLS

Languages: Python, TypeScript, JavaScript, Ruby

- **Tooling**: Git, Postman, Swagger

Verification: request specs, API testing, edge-case handling

- **Frontend**: React fundamentals, API-driven UI integration

Caching and Performance: Redis, node-cache, pagination, usage analytics queries

Backend and APIs: Node.js, Express, Ruby on Rails, REST API design, authentication, testing with RSpec and Jest

Data and Databases: PostgreSQL, SQL, relational data modeling, ETL pipelines, data ingestion patterns

Applied AI and LLMs: API integration, summarization, semantic search exploration, evaluation of outputs

DevOps and Production: Docker, GitHub Actions, CI pipelines, AWS exposure, Linux and shell scripting, structured logging

PROJECTS

govbot (Open States scrapers, data pipelines)
Python | GitHub Actions | Docker | JSON | ETL | Structured Logging | Data Validation

Open-source civic data tooling that addresses a core problem in legislative data: it is fragmented, difficult to track over time, and often dependent on centralized platforms that may be shut down or abandoned.

- Designed automated ETL pipelines that transform raw Open States data into normalized, append-only JSON artifacts suitable for analysis, auditing, and replay.
- Built reproducible workflows using timestamped artifacts, structured logs, Docker runs, and scheduled GitHub Actions to support independent verification and transparent updates.
- Collaborated with civic technologists and researchers to refine data structures based on real downstream analytics and public-facing use, not theoretical schemas.
- Standardized ETL patterns across jurisdictions to reduce duplicated effort for civic teams without dedicated data infrastructure.

Artisan Marketplace
Ruby on Rails | PostgreSQL | RSpec | Capybara | SimpleCov | FactoryBot | BCrypt

A multi-role e-commerce platform supporting distinct user experiences for admins and artisans.

- Built a role-based Rails application supporting distinct admin and artisan workflows with secure authentication and authorization.
- Designed relational data models with Active Record to support business rules and reliable query behavior.
- Organized the codebase using namespaced routes and clear separation of concerns to support maintainability.
- Implemented time-bound discount logic with validation and test coverage for edge cases.

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

- Refactored an existing codebase into a clean, scalable backend using TypeScript, the DAO pattern, and service-oriented design.
- Modeled complex relational data and delivered full API documentation and test coverage to support long-term developer usability.
- Implemented request validation and error handling to ensure consistent API behavior across endpoints.

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

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