# TAMARA DOWIS | SOFTWARE ENGINEER

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I'm the kind of person who carries logic puzzles in my bag and gets excited when something breaks, because it means I get to fix it. Before I started coding, I worked around the world in roles that taught me to listen closely, adapt quickly, and think in systems. I managed finance at Merrill Lynch, supported leprosy-affected communities in India, and taught science in Mexico and China. Now I build backend systems in Python, TypeScript, and Ruby, contribute to civic tech projects, and create APIs and pipelines that turn messy data into clean, usable formats. I'm currently growing my cloud and DevOps skills while preparing for the AWS Developer Associate exam.

## TECHNICAL SKILLS

- Python
- Ruby on Rails
- SQL / PostgreSQL
- Caching (Redis, node-cache)
- CI/CD Pipelines (GitHub Actions)
- Node.js / Express
- JavaScript / TypeScript
- REST APIs
- OOP / Design Patterns
- Docker (basic)
- Agile Tools (Jira, Confluence)
- API Documentation (Swagger, Postman)
- Automated Testing (RSpec, Jest, Capybara)
- Authentication (JWT, Passport, OAuth2)
- Debugging & Performance Troubleshooting

## HIGHLIGHTED PROJECTS

### SciScope
**Node.js | Express | PostgreSQL | Objection.js | Redis | Jest | Winston | Passport | JWT | node-cache**
A scalable RESTful API for science news aggregation with user authentication, caching, and analytics
- Architected scalable RESTful API with Express.js and PostgreSQL, implementing modular service architecture and external API integration patterns for science news aggregation.
- Designed relational data schema and implemented advanced SQL queries with Objection.js, including pagination and analytics.
- Explored article tagging with basic ML concepts to enhance search and categorization features.
- Built multi-layer caching system (Redis, node-cache) to improve performance and reduce load on external services.
- Established CI/CD pipeline with Jest testing framework and GitHub Actions, automating code quality checks, test execution, and deployment workflows.

### Adventure Life REST 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 a legacy 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.
- Incorporated async workflows and service abstraction to lay the groundwork for distributed systems and event-driven architecture.

### Artisan Marketplace
**Ruby on Rails | PostgreSQL | RSpec | Capybara | SimpleCov | FactoryBot | BCrypt**
A multi-tenant Rails e-commerce platform with role-based access control and automated testing workflows
- Architected multi-tenant e-commerce platform with Rails MVC architecture, implementing role-based access control and secure authentication patterns for admin and artisan user hierarchies.
- Designed and maintained relational data models using Active Record, supporting complex business logic and reliable query performance.
- Implemented modular application architecture with namespaced routing, service objects, and maintainable code patterns to support long-term scalability and team collaboration.
- Integrated conditional business logic for discount pricing, enabling time-based promotional rules and clear test coverage of edge cases.

## HIGHLIGHTED PROFESSIONAL EXPERIENCE

**Software Engineer** | Windy Civi                                                              08/2024 - Present
- Build and maintain the data pipelines for Windy Civi, a civic tech project making current legislation more accessible by decentralizing scraped government data and automating bots that publish updates to the Open Civic Data Blockchain.
- Script automated pipelines to save scraped data in timestamped, versioned folders for blockchain-style tracking.
- Standardize ETL workflows to ensure consistency across jurisdictions, enabling reproducible outputs and long-term data validation.
- Maintain GitHub repos with submodules and CI pipelines (GitHub Actions) to support transparency and open collaboration.
- Collaborate with a remote civic tech team, meeting regularly online and monthly in person to plan features and review progress.

**Science Educator** | International & U.S. Schools                                             07/2016 - Present
- Effectively communicated complex information to diverse audiences, tailoring explanations to different technical and learning styles.
- Analyzed learning data to surface patterns, test instructional strategies, and refine interventions based on outcomes.
- Taught myself new tech tools on short timelines and guided other teachers through integration and troubleshooting.

## 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