

# Bethany Pietroniro

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## 📄 Profile

Versatile software engineer with experience across the stack, and a background in mathematics that informs my approach to problem solving. Recently, I have built and improved backend APIs in Golang that serve millions of game players in production, implemented MQTT messaging services, led feature design of an admin dashboard in React, and added telemetry and entitlements modules to a TypeScript SDK. I'm passionate about effective collaboration, continuous learning, and the potential of software to do good things via smart and ethical engineering.



## 🏢 Professional Experience

**Software Engineer, Wolfjaw Studios**  05/2024 – present

- Successfully migrated real-time messaging backend services from a legacy pub-sub dependency to an efficient cloud solution using an efficient IoT-enabled MQTT protocol. Completed the migration before a contract renewal deadline, reducing overall application code complexity and decreasing service costs by over 50%.
- Built custom robust, comprehensive API test suites in Postman and integrated them into GitLab CI/CD pipelines for automated end-to-end testing in development and production environments.
- Designed protocol-compliant APIs and data models using OpenAPI Generator and protobufs
- Wrote and updated internal technical documentation
- Updated existing data models and code to integrate a new version of the AWS SDK for Go
- Debugged and refactored legacy code for social services including friends lists, presence updates, friend invitations, messaging, and blocks
- Designed and implemented the telemetry, entitlements, and messaging modules for a greenfield TypeScript SDK
- Wrote comprehensive test suites with Gingko/gomega (Golang) and Jest (TypeScript)
- Triggered and monitored production deployments using GitLab CI, ArgoCD, Grafana, and Confluent
- Made informed decisions that complemented pre-existing codebase patterns, while incorporating improvements
- Worked remotely, and occasionally in-office, with a team of 6-8 engineers across 3 timezones, and consulted regularly with production and other stakeholders; contributed to a supportive and positive team culture, fostering effective collaboration, code reviews, and idea-sharing

**Software Engineer, independent** 2022 – present


Open-source contributions and personal projects:

- VrüN Staking  and Rocket Lend  : non-custodial Ethereum staking and lending services (NextJS, wagmi, TailwindCSS)
- Umbra: open-source browser-based coding platform for real-time multiplayer programming and secure code execution (Node, Express, Yjs, React, ChakraUI, DigitalOcean, Cloudflare)
- ZenML: open-source MLOps framework (Python)
- Request Jar: a real-time tool for receiving and monitoring webhooks (Express, MongoDB, Nginx, PM2, Postgres, React, TypeScript)

**Computer Science and Mathematics Grader, Art of Problem Solving**  2020 – 2022

- Evaluated student mastery of programming fundamentals by grading over 200 challenge problem submissions in Python
- Performed detailed code reviews on student projects, addressing bugs, syntax, object oriented design, and code comprehensibility

## 🎓 Education

**Indiana University Bloomington, B.S., Mathematics** 

Completed honors courses on topics including linear algebra, group theory, cryptography, vector calculus, differential equations

**Johns Hopkins University, Computer Science elective coursework**

Introduction to Programming in Java (A average); Intermediate Programming in C/C++ (audit)

## Professional Development

- Ardan Labs Go training
- AWS Solutions Architect training
- Frontend Masters courses

## 💡 Skills

### Languages

TypeScript, JavaScript, Golang,  
Python, Ruby, SQL, HTML,  
CSS, bash  
Familiar: Java, C#

### Tools & Data

Git (GitHub/GitLab), Docker,  
MQTT, Jest, Ginkgo, ArgoCD,  
Postman, Grafana, PostgresSQL,  
gRPC, OpenAPI Generator

### Cloud

AWS, EMQX, DigitalOcean,  
Vercel, Cloudflare, Heroku

### Libraries & Frameworks

Node.js, React, Next.js, Express,  
OpenTelemetry, Tailwind CSS,  
Chakra UI, Material UI, Yjs,  
Sinatra, Flask, Gin