Maddy Woodrum

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I'm a Software Engineer with years of experience in full-stack development, in particular JavaScript/Node.js and Ruby. Previously, I was a Registered Nurse and Nurse Practitioner, where I learned that I enjoyed thinking critically and solving problems. Most recently, I built Twine ☐ , a drop-in auto-scaling WebSocket infrastructure for modern web applications that provides connection state recovery.

🧠 SKILLS

Launguages
JavaScript (ES6+), TypeScript, Ruby, SQL, Go

Cloud
AWS, DigitalOcean droplet, Heroku

Runtimes, Libraries & Frameworks
Node.js, Express, React, Sinatra, Socket.io

Misc. Technologies
Linux, PostgreSQL, MongoDB, Docker, Redis, OOP, Git/GitHub, REST APIs, HTTP, WebSocket, Postman

💼 PROFESSIONAL EXPERIENCE

Software Engineer, Creator, *Twine (https://twine-realtime.github.io/)* ☐ — Aug 2023 – present

Twine is a drop-in auto-scaling WebSocket infrastructure for modern web applications that provides connection state recovery. Twine drops into an existing application via client and server libraries and is automatically deployed into a user's AWS account.

- Architected and constructed a drop-in auto-scaling WebSocket infrastructure using various AWS services (EC2, DynamoDB, Elasticache for Redis, Elastic Beanstalk)
- Built a Node.js backend REST API to facilitate communication with the Twine Server and persist received data in DynamoDB and Redis
- Constructed a decoupled Redis pub/sub mechanism for sending data received from backend servers out to clients via a WebSocket connection
- Implemented automatic connection state recovery mechanisms that provide in-order delivery of missed data and mitigate client disruption in the case of a dropped WebSocket connection
- Wrote cron job logic to automate the removal of stale data from Redis
- Containerized server code in a Docker container for deployment
- Load-tested 96,000 concurrent virtual users over 20 minutes, successfully
- Load-tested 48,000 concurrent virtual users, subscribing each user to a room and receiving 1 message, over 20 minutes, successfully
- Authored comprehensive technical case study, readable at: (https://twine-realtime.github.io/ ☐)
- Collaborated remotely with an international team of four engineers across three time zones using agile workflow

Software Engineer, *Self-Employed* — 2021 – 2023

Developed freelance and open-source applications including:
- **Request-Inspect:** Tool for collecting, inspecting, and debugging Webhooks (JavaScript, Node.js, Express, React, MongoDB, PostgreSQL)
- **Shopper-Cart:** Database-backed e-commerce app (JavaScript, Node.js, React, MongoDB)
- **Contacts-App:** CRUD contacts manager (Ruby, Sinatra, HTML, CSS)

Nurse Practitioner, Registered Nurse, — Sep 2015 – Aug 2023
Memorial Sloan Kettering Cancer Center
- Worked as a part of a multidisciplinary team, charge nurse, and preceptor to new graduate RNs, fostering a collaborative environment and honing excellent communication skills

🎓 EDUCATION

Launch School, *Software Engineering, Capstone Program* ☐ — 2021 – 2023
A multi-year mastery-based curriculum teaching full-stack engineering fundamentals from first principles.

Hunter College, *Master's Degree, Nursing Science, Summa Cum Laude* — 2018 – 2020

Villanova University, *Bachelor of Science in Nursing, Cum Laude* — 2011 – 2015