Judah Landzberg

Software Engineer

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PROFILE

I'm a full-stack software engineer with a passion for understanding and solving problems. Most recently, I created Pennant, an open-source computational notebook with real-time collaboration and shared code execution. I have expertise in JavaScript and Go ecosystems. I also teach Python and problem-solving skills in Baltimore City.

PROFESSIONAL EXPERIENCE

Creator, Software Engineer   01/2023 – 09/2023
Pennant 🔗

- Created Pennant 🔗 , a real-time collaborative computational notebook with safe yet shared code execution for teams, automatic conflict-resolution for user inputs and imperceptible latency among the group
- Devised original low-level streaming and in-memory optimizations for speed so that code cell outputs from code run in succession would always be returned to the client in the correct order
- Configured queue orchestration with RabbitMQ to ensure groups were matched to their code execution engine
- Dockerized code engine instances for resource control, leveraged Docker Compose for networking with Redis and RabbitMQ, and configured Docker containers to stay open for longer to facilitate collaboration
- Sandboxed containers with gVisor to ensure safe execution of client-submitted code
- Leveraged CRDT frameworks in websocket collaboration service to handle state synchronization and automatic conflict-resolution for real-time collaboration
- Implemented React UI to translate user actions into CRDT data for use by backend collaboration micro-service
- Deployed to AWS EC2, utilized ECS for scaling websocket connections and S3 to permanently store notebooks
- Collaborated with a remote team of 4 engineers across 3 timezones

Software Engineer   03/2021 – 09/2023
Open Source
A few of the projects created & technologies used:

- RequestBin.site - a real-time application for receiving & debugging webhooks (Socket.io, Nginx, Redis, DigitalOcean Droplet, PM2)
- MyCart - a database-backed e-commerce app (MongoDB, Express, React, Redux, Node)
- Network: A phone directory for personal use (PostgreSQL, Express, vanilla JavaScript frontend, Node)

Computer Science and Math teacher   08/2013 – 06/2023
Mergenthaler High School, Baltimore City Public Schools

- Developed games in Python, including Tic-Tac-Toe, Choose-Your Own-Adventure Chat and Snake
- Designed HTML, CSS and JavaScript projects for students to create their own personal websites
- Used Linux to demonstrate file manipulation as well as to help collagues automate file organization

TECHNICAL SKILLS

Tooling
Docker, AWS Services (EC2, Lambda, S3, ECS), Linux, Bash, Redis, RabbitMQ, Heroku, DigitalOcean

Back end
Node.js, Express, Go, Python, PostgreSQL, MongoDB, RESTful APIs

Front end
JavaScript, React/Redux, HTML/CSS, YJS CRDT Framework

AWS Certification
AWS Practitioner Certification

EDUCATION

Boston College   06/2010 | Chestnut Hill, MA
Bachelor of Arts in Economics

University of Hawai'i at Manoa   05/2013 | Honolulu, HI
Master of Arts in Chinese Language and Literature