

# Judah Landzberg

## Senior Software Engineer

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### PROFILE

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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've built with JavaScript and Go ecosystems. I also teach Python and problem-solving skills in Baltimore City.

### PROFESSIONAL EXPERIENCE

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#### Creator, Software Engineer

2023

*Pennant* 📄

- Created Pennant 📄, an open-source computational notebook with real-time collaboration and shared code execution for up to 5 users per notebook
- Configured the service on AWS EC2, utilized AWS ECS for container orchestration and AWS S3 for persistent storage
- Dockerized code engine instances for resource control, implemented container networking with Redis and RabbitMQ, and customized Docker for collaboration
- Devised original low-level streaming and in-memory optimizations for speed, and queue orchestration to allow collaboration in our uniquely designed code execution engine
- Sandboxed containers 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
- Designed and implemented React UI which translates user interactions into CRDT data for use by the backend collaboration micro-service
- Collaborated with a remote team of 4 engineers across 3 timezones

#### Software Engineer

2021 – 2023

*Self-employed*

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)
- Shopping Cart - a database-backed e-commerce app (MongoDB, Express, React, Redux, Node)
- Phone directory: A phone directory for personal use (PostgreSQL, Express, vanilla JavaScript frontend, Node)

#### Computer Science and Math teacher

2013 – present

*Mergenthaler High School, Baltimore City Public Schools*

- Mergenthaler Excelerator Academy Teacher-of-the-Year
- Hosted a mentoring program pairing students with Software Engineer professionals

### TECHNICAL SKILLS

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#### 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

### EDUCATION

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#### B.A. Economics

*Boston College*

#### M.A. Chinese Literature

*University of Hawai'i at Manoa*