

Michael Ricasa

Software Engineer

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EXPERIENCE

Co-creator; Software Engineer

2023 | Remote

Pennant | pennant-notebook.github.io 🌐

- Integrated a conflict-free replicated data type (CRDT) framework to synchronize real-time document updates for up to 5 collaborators with minimal latency
- Rewrote code editor binding logic to optimize client-side TCP connections from a linear to constant scale
- Designed an asynchronous execution engine architecture using background workers, Redis, and RabbitMQ, optimizing API request handling and improving UI responsiveness for end users
- Implemented custom stream processing and in-memory optimizations, leading to a 90% reduction in execution request processing time and eliminating file writing errors
- Devised a multi-layered security approach for executing untrusted user code with language sandboxing, Docker configuration hardening, and the principle of least privilege
- Implemented security mechanisms that improved host capacity by 200% versus kernel virtualization alternatives
- Automated worker and host resource management using Docker API, control groups, and CRON jobs

Full Stack Developer

2021 – 2023 | Remote

Open source projects

- SnackBin: Webhook monitoring tool. Background workers aggregate metrics, which are stored using a NoSQL database. Built with React, WebSockets, MongoDB, pm2, and nginx
- Dailies: Todo list application created using express, handlebars, and PostgreSQL; jest testing

Data Quality Lead

2019 – 2022 | Burlingame, CA

Meta (Contract engaged through Experis, Lodestone)

- Provided consultation to direct clients and cross-functional partners on the planning, strategy, and optimization of data operations for rapidly evolving AR/VR products, achieving client satisfaction ratings above 92% each quarter
- Managed a team of 12 analysts and engineers supporting several end-to-end workflows, encompassing data collection, uploads, management, and ingestion
- Contributed to machine learning model development powering face, eye, and hand tracking technologies

SKILLS

Frontend

JavaScript, TypeScript,
React/Redux, HTML/CSS, React
Testing Library, yjs

Backend

Python, Go, Node.js, Express.js,
PostgreSQL, bash, MongoDB,
Redis, rabbitMQ, RESTful APIs,
Nginx, pm2

Tooling

Git/GitHub, Docker, Linux, AWS
(EC2, S3, DynamoDB, Elasticache,
SQS), Digital Ocean, Jest, Heroku,
Fly

EDUCATION

Software Engineering Capstone

2021 – 2023 | Remote

Launch School

Multi-year, mastery-based learning program focused on software engineering fundamentals

B.A. in Psychology, Minor in Applied Computing (ACBSS)

2016 – 2019 | San Jose, California

San Jose State University

Relevant coursework: Data Structures and Algorithms, R for Data Science, Human Factors