Sy-Dar Steven Liou

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SUMMARY

I'm a software engineer with a passion for observing, analyzing, and solving problems. Recently, I built Tailslide, an open source feature flag framework with automatic circuit breaking. I've developed applications with Go, JavaScript, Python, and Ruby, and I'm always excited to learn new technologies and collaborate with other software engineers.

TECHNICAL EXPERIENCE

Capstone Project - Tailslide **May 2022 - Present**
Software Engineer Boston, MA

Tailslide is an open-source feature flag framework with circuit breaking that simplifies software release for companies with microservices infrastructure.

- Architected a feature release toggle framework for backend microservices with automatic circuit-breaking capability using NATS JetStream and RedisTimeSeries.
- Constructed an Express backend for handling feature flag requests from microservices clients, a Postgres database for storing feature flag data, and a React dashboard for feature flag management.
- Solved challenges related to horizontal scaling of microservices, such as consistency and availability, and load, on the feature flag framework to handle multiple applications and their duplicate instances.
- Implemented circuit-breaking with automated circuit-recovery logic by coordinating the communications among Express backend, NATS JetStream, RedisTimeSeries, and a Node.js application.
- Developed server-side SDKs for accessing feature flags data for various languages, Go, JavaScript, Python, and Ruby.
- Automated the deployment of feature flag framework with Docker.
- Authored a comprehensive technical case study on feature flag as a deployment strategy, architecture of a feature release toggle with automatic circuit breaking, and design decisions for such implementation.
- Collaborated remotely with a team of 4 software engineers across the US.

Launch School **April 2020 - Present**
Software Engineering Student Boston, MA

Launch School is a full-stack web development program with a focus on mastery of software engineering fundamentals. Notable projects completed include:

- Trellogy: A Trello inspired collaboration app built using Node.js, Express, React/Redux, and MongoDB.
- Spaceball: A request bin app for inspecting webhook payloads, built using Node.js, Express, React, and PostgresSQL.
- Taskcanini: A todo list, event planning app built using Ruby Sinatra and PostgresSQL.

SKILLS

Languages & Frameworks	Cloud	Other Technologies
JavaScript, Go, Python, Ruby, SQL, HTML, CSS, Express, React/Redux, Handlebars, Jest	AWS, DigitalOcean, Heroku	HTTP, REST APIs, MVC, Docker, PostgresSQL, Nginx, MongoDB, Git

PROFESSIONAL EXPERIENCE

Alnylam Pharmaceuticals **June 2018 - May 2022**
Senior Associate Scientist Boston, MA

- Performed computer modeling and simulation for various siRNA drugs in nonclinical and clinical development, for drug safety, efficacy, and first-in-human dose projection.
- Researched on novel siRNA drug modeling in liver, CNS, and the eye.
- Analyzed histology slides with computer AI software for quantifying pathology findings.

EDUCATION

Launch School: Software Engineering & Full-stack Web Development 2020 - 2022
University of Pennsylvania: MSE in Biomedical Engineering 2013 - 2015
University of Virginia: BSE in Biomedical Engineering 2009 - 2013