

EDUCATION

RICE UNIVERSITY

B.S. IN COMPUTER SCIENCE,
STATISTICS
Aug 2012 - May 2016
GPA: 3.71

SKILLS

PROGRAMMING LANGUAGES

- Java
- Python
- Typescript/Javascript
- SQL
- R
- Matlab
- Rust (learning)

BACKEND FRAMEWORKS

- SpringBoot, Spring (Java)
- Flask, Django (Python)
- Express.js (Node.js)
- REST, GraphQL, gRPC

FRONTEND FRAMEWORKS

- React
- React Native, Expo
- Vue
- Angular

CLOUD TECHNOLOGIES

- Amazon Web Services
- Google Cloud Platform
- Kubernetes
- Docker

EXPERIENCE

ENCIPHER | PRINCIPAL SOFTWARE ENGINEER

Oct 2022 - July 2023 | Houston, TX (Remote)

- Designed the system architecture, and led a five-person engineering team in the implementation of Encipher's flagship product, InfinityVAULT, a trustless role-based secure data storage and permissioning system.
- Designed the gRPC interface and data-modeling between the Python backend server, Cassandra database, and multiple frontend clients: React App, Microsoft Office Plug-In, Desktop Client. Built the backend server and React App, while leading other developers on the development of the other clients.
- Setup the architecture for an asynchronous task workflow orchestrator to improve the performance and scalability of the product.
- Coordinated with executive leaders and stakeholders on product requirements and deliverables.
- Patent-pending on the trustless and role-based secure data storage methodologies.

DISCORD | SENIOR SOFTWARE ENGINEER

Apr 2022 - Oct 2022 | San Francisco, CA (Remote)

- Developed various marketing surfaces and in-app promotions for premium subscriptions (Nitro) on Desktop and Mobile clients.
- Developed a smoother and more streamlined payment experience for the Mobile client, resulting in an increased number of users completing the payment flow, and increased MRR.
- Developed and launched a new premium subscription tier (Nitro Basic) for Desktop and Mobile. Responsible for integrating with the Apple App Store and Google Play Store.
- Migrated and maintained a gRPC microservice from Python to Rust for gift and promotion codes of Discord Nitro subscriptions. Highly resilient and available, with over 10M requests per day and <10ms latency.

REDFIN | SENIOR SOFTWARE ENGINEER

Jan 2020 - Mar 2022 | Frisco, TX

- Senior Engineer in the Home Services Organization, responsible for designing and building out a platform to manage home renovation projects across Redfin properties.
- Became the Lead Engineer for the "Vendor Management" team after a team split. Focused on developing a platform for vendor recommendations, ratings, and reviews, based on location and trade.
- Led the design and development of several large projects, and mentored junior and new teammates, with weekly 1:1's, pair programming and debugging sessions, answering questions on Slack in the team engineering channels.
- Backend technologies include: Java, GraphQL, Apollo (for GraphQL schema federation), Bazel (and Gradle), Guice, SpringBoot, PostgreSQL (hosted on AWS RDS), Flyway (for DB migrations), Netflix's Conductor (for task orchestration), Kafka and Samza for stream/event processing. Kubernetes and Spinnaker for deployment.
- Frontend technologies include: React for desktop web application. React Native for mobile application (iOS, Android)
- Designed the integration with 3rd party systems and API's such as Coupa, to correctly sync and manage payment within Builder Tools. Including developing cron jobs to sync data between platforms.
- Worked with product and business managers to understand the needs of the users, collaborated with UX designers, and planned and executed the steps for development.
- One of the founding members of both the React Native and Typescript Working Groups, to improve the developer experience, and increase adoption across the company.
- Led the initiative to migrate the team's code from a monorepo to poly-repos, with isolated deployments. Set up the new repositories, CI/CD pipelines, and documented best practices for the team.

EXPERIENCE CONT.

CAPITAL ONE | SENIOR SOFTWARE ENGINEER

July 2019 - Jan 2020 | Plano, TX

- Designed and developed the Metadata Management Service, which allows users to discover metadata about data sources across the entire company for various marketing purposes. Also developed a Vue Application with role-management to facilitate the data source onboarding process.
- Patent-pending on dataset collation process to use data from multiple sources.
- Patent-pending on API introspection and invocation process.
- Demonstrated leadership by mentoring a new team member on Vue development, and leading a sub-team with detailed requirements and deadlines.
- Continued maintenance and development on the six microservices for the marketing platform.

CAPITAL ONE | SOFTWARE ENGINEER

July 2017 - July 2019 | Plano, TX

- Designed and developed an enterprise-wide platform for automated, real-time, always-on, intelligent marketing platform. Primary developer and owner of six Java SpringBoot microservices, and one of three frontend Vue developers.
- Developed a Node.js Ad Server integrated with Google AdSense to serve individually customized vehicle ads based on customer information. Built a Google Chrome extension that parses information from the source website to demonstrate the personalized ads that could be served. Patent pending.
- Instrumented metrics for the team across all microservices using Prometheus. Authored rules for PagerDuty alerts based on metrics, with Slack integration.
- Designed and implemented an Automated Handwriting System using RNN Machine Learning Algorithms, with an Angular Web UI, Python Flask server, and polling client to write greeting cards to customers.
- Developed an enterprise-wide API for Cloud file storage abstraction, and an automated data migration system to migrate data from the on-premise Data Center to the Cloud.

CAPITAL ONE | ASSOCIATE SOFTWARE ENGINEER

July 2016 - July 2017 | Plano, TX

- Developed an Angular Widget across all Financial Services web pages to capture customer feedback, backed by a Java SpringBoot microservice and PostgreSQL database.
- Built an ad-hoc data analysis platform using Apache Zeppelin (Java). Features include connecting to Redshift Clusters, and an Angular Web UI with a database schema browser, and SQL parser/linter/visualizer.

RECENT PERSONAL PROJECTS

MULTI-AGENT CHATGPT

In-Development

- Allow users to create group chats with friends, and an AI personality.
- Motivation: Group chats are fun, but it's easy to lose context and forget what people have said in the past. ChatGPT is awesome, but I want my friends to join in the conversation too.
- Tech Stack: React Native (Typescript), Supabase.js with Postgres (iOS Beta available on TestFlight).

LIFE AS BOOLEANS

Development Paused

- Track and visualize daily activities/habits as booleans.
- Motivation: I love tracking and visualizing data about my life, and used to keep a daily spreadsheet of over 60 columns. Thought to myself, wouldn't this be better as an app/website?
- Tech Stack: React (Typescript) with Google Firebase (<https://yaylinda.github.io/life-as-booleans/>). React Native (Typescript) with Google Firebase (iOS Beta available on TestFlight).
- Future Plans: Temporarily paused when Apple announced this functionality as a native app on iOS 17.

SCRIPTABLE WIDGETS FOR IOS

Seeking Inspiration

- Collection of seven HomeScreen widgets, that I designed and developed, for the Scriptable App on iOS. With over 300+ stars and 100+ forks on GitHub.
- Motivation: Apple didn't allow widgets on the HomeScreen for the longest time. Even now, many widgets are basic and do not contain enough information.
- Tech Stack: JavaScript (<https://github.com/yaylinda/scriptable>)
- Future Plans: Seeking inspiration for other widgets!