

## EXPERIENCE

### ENCIPHER | PRINCIPAL SOFTWARE ENGINEER

Oct 2022 - Present | Houston, TX (Remote)

- Designed the system architecture, and led small but mighty 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.

### CAPITAL ONE | SENIOR SOFTWARE ENGINEER

July 2019 - Jan 2020 | Plano, TX

- Designed and developed Metadata Management Service. Including discovering metadata across entire corporation, automated data pipeline to bring data into internal database to be used for the marketing platform. Developed frontend application with role-management to facilitate the data onboarding process. (Java, SpringBoot, Vue, PostgreSQL, MemSQL, AWS, ECS)
- Patent pending on dataset collation process to use data from multiple sources, with multiple cadences as consolidated dynamic view. (Java, SpringBoot, NodeJS, SQL)
- Patent pending on API introspection and invocation process. (Java, SpringBoot, OpenAPI Spec)
- Continued maintenance and development on six microservices for marketing platform.
- Demonstrated leadership by mentoring new team member on Vue development, and leading sub-team with detailed requirements and dates.

### 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 microservices, and one of three frontend developers. (Java, SpringBoot, NodeJS, MemSQL, PostgreSQL, Javascript/Typescript, HTML/CSS, WebComponents, AWS)
- Developed an Ad Server integrated with Google AdSense to serve dynamically rendered, individually customized vehicle ads based on customer information. Intelligently parses vehicle make, model, and body type from source website. Patent pending. (Java, SpringBoot, NodeJS, ECS, Redis, HTML/CSS, Mustache)
- Instrumented metrics for over a dozen microservices, using Prometheus. Authored rules for PagerDuty alerts based on metrics, with Slack integration. (Prometheus, PromQL, Slack)
- Implemented API and UI for Call Center agents to capture notes from customer communications. (Java, Angular, AWS, PostgreSQL)
- Designed and implemented Automated Handwriting System using RNN Machine Learning Algorithms, with UI, server, and polling client to write greeting cards to customers. (Python, Tensorflow, Angular, AxiDraw V3)
- Developed enterprise-wide API for Cloud file storage abstraction, and an automated data migration system to extract files from the on-premise Data Center to the Cloud with unique IDs for fast retrieval. (Java, ECS, S3, SQS, CFT, SQL)

## **CAPITAL ONE | ASSOCIATE SOFTWARE ENGINEER**

July 2016 - July 2017 | Plano, TX

- Developed an Angular Widget for all Financial Services applications to capture customer feedback. (Java, SpringBoot, Angular, AWS, PostgreSQL, Splunk)
- Built ad-hoc data analysis platform using open-source Apache Zeppelin. Implemented features: connection to Redshift Clusters, schema browser, SQL parser/linter/visualizer. (Java, Angular, AWS, Redshift, Elasticsearch, Spark, R, Python)

## EDUCATION

### **RICE UNIVERSITY | COMPUTER SCIENCE, STATISTICS**

Aug 2012 - May 2016 | GPA: 3.7

- Computer Science Courses: Artificial Intelligence, Game Creation & Design, Operating Systems, Concurrent Programming, Database Systems and Design, Object Oriented Programming, Compilers, Data Structures, Advanced Algorithms
- Statistics Courses: Data Mining, Statistical Learning, Financial Time Series, Regression Analysis, Bioinformatics

## SKILLS

### **PROGRAMMING LANGUAGES**

- Java
- Python
- Typescript
- JavaScript
- HTML/CSS
- SQL
- R
- Rust (new)

### **FRAMEWORKS & TECHNOLOGIES**

- AWS
- Kubernetes
- GraphQL + Apollo
- Spring/SpringBoot
- React
- React Native
- Vue