

# Curtis Fenner

TOKYO, JAPAN

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## EXPERIENCE

### Givery — Software Engineer, Track Test & Common ..... Tokyo, Japan. Jan. 2023–current

- » Backend engineer on the Track Test product and on common systems
- » Track Test Team dev. lead (2025–) estimated, and refined plans for long-term projects
- » Redesigned slow SQL queries to eliminate load and change slow-loading pages to instantly loading ones
- ✎ > **Scala 2, Scala 3 & Play Framework** – for service backends
- » **TypeScript** with **NestJS & Zod** – for service backends
- » **AWS** – for cloud infrastructure (ECS, S3, Rekognition, etc.)
- » **Postgresql (SQL DB)** in **AWS Aurora** – for databases

### PayPay — Software Engineer, Online \*\* Remote, Jun. '21–Apr. '22 \*\* Tokyo, Japan. Apr. 2022– Jan 2023

- » Backend engineer on the Online team, which external APIs for accepting PayPay payments online
- » Designed, documented, and implemented new APIs used by merchants to accept PayPay payments
- » Designed and lead a new microservice, using requirements from Product Managers and other teams
- ✎ > **Spring Boot, Java, & Kotlin** – for backend implementation
- » **AWS** – for cloud hosting

### Square — Software Engineer, Orders API ..... Atlanta, GA. Aug. 2018–Dec. 2020

- » Backend engineer on the Orders API team, which operates both a public REST API and internal POS API, emphasizing maintainability, scalability, and strong consistency
- ✎ > **Java** – for API server implementation
- » **Protocol Buffers** – for RPCs, modeling the API schema, and database serialization
- » **TypeScript & JavaScript** – for building internal web interfaces
- » **MySQL** – for durable, distributed storage enabling a strongly consistent API experience
- » Refactored complex validation logic to greatly improve test coverage and reduce maintenance burden
- » Created reusable library functions to support multiple API versions with minimal effort
- » Wrote and presented thorough documentation for complex internal calculation logic

## INTERNSHIPS

### Qualtrics — Software Engineer Intern, Data Platform ..... Seattle, WA. Summer 2017

- ✎ > **Scala** – for backend implementation
- » **Elasticsearch** – for aggregating metrics to produce custom reports, and for log analysis
- » Redesigned a data aggregation feature to get correct weighting across different displays

### Qumulo — Software Engineer Intern, Filesystem Performance ..... Seattle, WA. Summer 2016

- ✎ > **C** – for filesystem server implementation
- » **Python** – for integration-test automation and code generation
- » Eliminated lock contention in a multithreaded cache to reduce file operation latency

### Square — Software Engineer Intern, Public API ..... San Francisco, CA. Summer 2015

- ✎ > **Node.JS** – for implementation of microservice serving public API
- » **Go** – for implementation of a new microservice to eventually replace the Node.JS server
- » Optimized and refactored public API server to halve average response time

## EDUCATION & LANGUAGE

### University of Michigan: Computer Science B.S.E, 4.0 GPA ..... Ann Arbor, MI. 2014 – 2018

- » **Selected Coursework:** Distributed Systems (W2017), Grad. Programming Languages (F2017)
- » Teaching assistant for Distributed Systems using Golang (F2017)
- » World Finalist in 2017 ACM International Collegiate Programming Contest (ICPC)
- » Japanese Language I + II

### Japanese Language Proficiency Test N3 (JLPT/日本語能力試験) ..... Tokyo – July 2024

## SELECTED PROJECTS

### Shiru Programming Language & Compiler ..... <https://github.com/CurtisFenner/shiru-ts>

- » Designed and implemented a toy programming language, compiler, and assertion verifier, including a PEG parser, a type-checker, a simple SMT solver, and a JavaScript code generator.