Curtis Fenner
Tokyo, Japan

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EXPERIENCE

PayPay — Software Engineer, Online Remote, Jun. '21–Apr. '22 Tokyo, Japan. Apr. 2022–current
- » 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
- » **Technologies**:
  - › **Spring Boot**, **Java**, & **Kotlin** – for backend implementation
  - › **AWS** – for cloud hosting
- » Refactored codebase to improve test coverage, uncover bugs, and improve maintainability

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, as well as internal systems that serve Square Point-of-Sale mobile apps
- » Designed features that integrate with many microservices such as payments, catalog, and customers
- » Work emphasizes designs that are maintainable, scalable, strongly consistent, and highly available
- » **Technologies**:
  - › **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

Qualtrics — Software Engineer Intern, Data Platform Seattle, WA. Summer 2017
- » **Technologies**:
  - › **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
- » **Technologies**:
  - › **C** – for filesystem server implementation
  - › **Python** – for integration-test automation and code generation
- » Doubled free-space reclamation rate by implementing sharding for large file deletion
- » Eliminated lock contention in a multithreaded cache to reduce file operation latency

Square — Software Engineer Intern, Public API San Francisco, CA. Summer 2015
- » **Technologies**:
  - › **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

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)

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.