

Lachlan McCarty

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EDUCATION

Princeton University

Bachelor's of Science in Engineering, Computer Science
GPA: 3.89, Departmental GPA: 3.97

May 2022
Princeton, NJ

- Relevant Coursework: Distributed Systems, Computer Networks, Information Security, Programming Languages (Grad), Automated Reasoning about Software (Grad), Functional Programming, Operating Systems, Machine Learning, Algorithms and Data Structures
- Activities: ACM Workshops Chair, HackPrinceton (Development Subteam Head), USG Committee on Student Housing

EXPERIENCE

Stripe

Software Engineering Intern - Document Database (Foundation)

May 2021 - August 2021
Remote

- Developed a system for monitoring and querying Stripe's 1200+ MongoDB replica sets by health, config, sharding, etc.
- Iterated on design and feature set to best serve the needs of other Document Database engineers, especially those on-call
- Built a gRPC service in Go to discover replica sets from Consul and periodically index their metadata using Blevesearch
- Integrated the replica set search and lookup functionality into the team's internal web tooling using React and Flow

Shuffle

Software Engineering Intern

June 2020 - August 2020
Remote

- Shuffle (**getshuffle.app**) is a podcast sharing and discovery platform centered around short digestible podcast highlights
- Spearheaded web-based internal tool for curating user feeds, managing the beta waitlist, monitoring the podcast audio transcription pipeline, and configuring automatic transcription for popular shows using React and TypeScript
- Facilitated product-wide database migration from Firestore (NoSQL) to PostgreSQL with an idempotent data importing system and dual write/read tooling for a smooth transition
- Collaborated with frontend engineers to deliver features such as social loop notifications, following, comment liking

Airbnb

Software Engineering Intern - Payments

June 2019 - August 2019
San Francisco, CA

- Worked in Java on the incentive (e.g. coupon, credit, cash) issuance service, designed as the service-oriented architecture replacement for a fragmented incentive ecosystem
- Developed budget management and other safety/security features into the incentive issuance service to protect against costly mistakes or programmer error
- Integrated budget management into the incentive program configuration web app using React, TypeScript, Redux
- Migrated database schemas and crafted budget alert email templates using Ruby
- Tracked usage, performance, and error rates with Datadog

PROJECTS

Raft Consensus Algorithm

Go

April 2021

- Implemented Raft in Go for a replicated state machine with strong consistency and partition tolerance.

pinggo

Go, ICMP, CLI

May 2020

- Full implementation of the ping network diagnostic tool in Go. Available on GitHub at github.com/lachm/pinggo

TECHNICAL STRENGTHS

Skills

Programming Languages

Datastores

Tools

Technologies

Markup & Style

Backend, Full Stack, Web Scraping, Formal Methods

Python, Go, OCaml, Java, C, TypeScript, JavaScript

PostgreSQL, MongoDB, Redis, Consul, Firestore

Git, GitHub, Coq, bash, zsh, Docker

gRPC, Thrift, React, Redux, Flask, Django, Chrome Extension SDK

HTML, CSS, L^AT_EX