

# Lachlan McCarty

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## EDUCATION

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### Princeton University

*Bachelor's of Science in Engineering, Computer Science*  
GPA: 3.90, Departmental GPA: 3.98

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

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### Plaid

*Software Engineer*

Starting August 2022  
San Francisco, CA

### 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

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### 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](https://github.com/lachm/pinggo)

## TECHNICAL STRENGTHS

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### Skills

Backend, Full Stack, Web Scraping, Formal Methods

### Programming Languages

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

### Datastores

PostgreSQL, MongoDB, Redis, Consul, Firestore

### Tools

Git, GitHub, Coq, bash, zsh, Docker

### Technologies

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

### Markup & Style

HTML, CSS,  $\LaTeX$