

Kye Burchard

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EDUCATION

MIT | SB ELECTRICAL ENGINEERING AND COMPUTER SCIENCE

GPA: 5.0

2017 - 2021

EXPERIENCE

Falconer | FOUNDING ENGINEER

Mar. 2025 - Present

- Building a self-updating knowledge platform for teams and AI agents

Stripe | STAFF SOFTWARE ENGINEER (API SERVICES)

Aug. 2024 - Mar. 2025

- Maintained 99.9999% availability for API gateway serving all external requests
- Led design and launch of next-gen API platform — shipped first v2 API to GA, powers 100% of dashboard traffic
- Owned technical strategy for multiple platform initiatives; drove alignment across org boundaries

Stripe | SENIOR SOFTWARE ENGINEER (API SERVICES)

Jan. 2023 - Aug. 2024

- Shaped team roadmap and company-wide API design standards through technical proposals and cross-org alignment
- Designed and shipped key parts of GraphQL architecture for frontend data fetching (auth, batching, rate limiting, reliability)

Stripe | SOFTWARE ENGINEER (DASHBOARD PLATFORM)

Feb. 2021 - Dec. 2022

- Pushed Dashboard reliability (mitigated 50+ incidents) and performance to new peaks
- Built platformized infrastructure to improve performance, reliability, and security of the Stripe Dashboard

HackMIT | LOGISTICS HEAD 2019, DEV & CORPORATE RELATIONS 2018

April 2018 – Sept. 2019

- Headed a 12-person team to plan and execute logistics for a 1,200-person, 3-day hackathon

Other

- **MIT Media Lab** Designed data pipeline to improve data quality & location detection for Rhythm Badges
- **web.lab** Coordinated logistics, staff, and delivered lectures for 200+ person web development course
- **Stripe Internship** Improved the performance of the highest-traffic page by 2-3x
- **Microsoft Garage** Designed & implemented a modular, scalable audit logging architecture as intern
- **Maseeh Hall** Led largest dorm at MIT in reviving culture, resulting in a 20% improvement in retention
- **SIPB** Keyholder & contributor at MIT's student computing group
- **Debate** Policy Debate state champion (Montana, 2017), MIT debate team (2018-19)

PROJECTS

Overcooked FPGA | SYSTEMVERILOG, C++, PYTHON

github.com/kyeb/overcooked-fpga

An online-multiplayer implementation of the game Overcooked, implemented entirely in hardware. Designed & implemented protocol to synchronize game state between FPGAs over the internet in real time.

Politichat | REACT, NODE.JS, MONGODB

<https://politi.chat>

Startup helping campaigns in the age of COVID-19 with a replacement for 1-on-1 conversations with candidates.

COURSEWORK

Fall 2020	6.111 Digital Systems Lab, 6.837 Graphics, 6.S081 Operating Systems, 6.S079 Quantum Circuits
Spring 2020	6.858 Computer Security, 18.05 Probability & Statistics, CS91r Political Tech (Harvard)
Fall 2019	6.172 Performance Engineering, 6.034 Artificial Intelligence, 18.06 Linear Algebra
Spring 2019	6.033 Computer Systems Engineering, 6.002 Circuits, 6.036 Machine Learning

SKILLS

ADVANCED	TypeScript, Python, Ruby, Java, Next.js, Linux, C, HTML/CSS, gRPC/Protobuf
KNOWLEDGEABLE	Terraform, Pulumi, C++, C#, \LaTeX
EXPLORING	Rust, SystemVerilog