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

- Owned Falconer's unified agent platform: tool execution engine, prompt caching architecture, and streaming protocol, delivered as a chat app, Slack bot, and async background workflows
- Established measurable quality loops with dataset-driven evals, retrieval precision/recall/F1, and step-level telemetry for agent debugging
- Built the product and infrastructure layers around the agent: ingestion, retrieval, chat UI, and web application across cloud and on-prem deployments

Stripe | Staff Software Engineer (API Services)   Aug. 2024 - Mar. 2025

- Architected Stripe's v2 API definition layer (single artifact powering SDKs, CLI, docs, dashboard APIs, routing, and rate limiting) with enforced API conventions and a new versioning scheme
- Shipped the first v2 APIs to GA while hardening the API gateway to meet Stripe's most stringent SLOs
- Designed and led engineering onboarding sessions, including 'Big Diagram of Stripe,' training hundreds of engineers on system architecture, API design, and debugging production systems

Stripe | Senior Software Engineer (API Services)   Jan. 2023 - Aug. 2024

- Defined company-wide API design patterns and guidelines (domain modeling, composability, and abstraction layering) used by Stripe's API Review process to evaluate every public API
- Designed and shipped key parts of GraphQL architecture (auth, batching, rate limiting, reliability)

Stripe | Software Engineer (Dashboard Platform)   Feb. 2021 - Dec. 2022

- Built automated performance tooling — detecting unused API fields, network waterfalls, and N+1 queries across hundreds of Dashboard pages
- Established reliability and security standards for Stripe's Dashboard, building automated error alerting and component ownership enforcement across team boundaries

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 & contributer at MIT's student computing group
- **Debate** Policy Debate state champion (Montana, 2017), MIT debate team (2018-19)

COURSEWORK

Performance Engineering, AI, Machine Learning, Computer Security, Operating Systems, Computer Systems Engineering

ENGINEERING FOCUS

DOMAINS	API architecture & versioning, agent orchestration, distributed systems
LANGUAGES	TypeScript, Python, Go, Ruby, Java
INFRA	AWS, Linux, OpenTelemetry