Ibraheem Amin

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Education

Princeton University **August 2024 – May 2028**
B.S.E in Computer Science; Minors in Optimization, Statistics & Machine Learning *Princeton, NJ*

- **Relevant Coursework**: Distributed Systems, Data Structures & Algorithms, Application Development, Functional Programming, Natural Language Processing, Machine Learning, Computer Systems, Reasoning about Computation, Advanced Theoretical Computer Science, Probability and Stochastic Systems, Honors Linear Algebra, Data & Culture,
- **Course Assistant:** Provided teaching support for 200-level courses: Data Structures and Algorithms, Introduction to Programming Systems, Reasoning About Computation

Experience

Software Engineer Intern **June 2026 – August 2026**
KnotAPI (MyCard Inc.) *New York, NY*

- Built and deployed internal AI router and agent harness on **GCP Kubernetes** with pod-level isolation and tracing, integrating company knowledge bases, CLIs, Slack, and Linear; reduced monthly company-wide AI spend by **$16K**
- Implemented queue partitioning to resolve failures in high-volume (**10k tasks/15 min**) **Cloud Tasks** queues; Routed workloads to dedicated **GCP Cloud Run** replicas deployed via canary rollout strategy via **Laravel Pennant** feature flags
- Shipped tooling for triage of persistent-connection incidents across **120+** integrations by building emulator scripts, proxy and session monitors, and agent workflows to analyze **HAR** files using **Go**, **Frida**, **HTTPToolkit**, and **mitmproxy**

Lead Core Infrastructure Engineer, President **September 2025 – Present**
TigerApps *Princeton, NJ*

- Lead a **50-member** product and engineering organization while owning production infrastructure and developer operations on **AWS, GCP & Cloudflare** for **7+** apps serving as the primary apps hub for **11k+** Princeton University students and faculty
- Designed and shipped new campus products and shared AI infrastructure, including a unified data layer powering chat applications with **11,000+ user messages** in launch week, and secured **$7K per semester** in funding from Anthropic

Applied AI Intern **December 2025 – February 2026**
PlayMaker Software Inc. *Remote, New York, NY*

- Built a **Selenium** and **Playwright** pipeline in **Python** that aggregated and normalized partnership and sentiment data from **20+** sources across **150+** professional and minor-league sports teams
- Developed **reactive** campaign-generation workflows and **RAG** system via **Convex** that converted branding, team, and audience data into sponsorship proposals using **text** and **image** modalities for brand partners via **Gemini Enterprise**

Founding Software Engineer **June 2025 – August 2025**
EVAL Gaming Inc. | Keller Center eLab Startup Accelerator *Princeton, NJ*

- Bootstrapped a **Next.js** recruiting platform connecting esports prospects with collegiate programs through player analytics, coach discovery, and league-management tools supporting enterprise and consumer accounts
- Built a player-rating and discovery engine in **FastAPI** through reverse engineering VALORANT, Smash Ultimate, and Rocket League APIs and game clients to serve data to and from **20+ organizations** and **300+ athletes**

Technical Skills

Languages: Python, Go, C++, JavaScript, TypeScript, Java, C, C#, SQL, React, Bash, Terraform, Nix, TLA$^+$
Technologies: Linux, Kubernetes, AWS, GCP, Cloudflare, Vercel, Docker/Containerd, Next.js, FastAPI, Express.js, NoSQL
AI: ACP, A2A, MCP (v1, v2), Claude Code, Codex, just-bash, cmux, Herdr, tmux, Composio, Langfuse, Daytona, GKE Sandbox
Certifications: Cisco Networking & CyberSecurity, Microsoft Azure AI, Google Data Analytics, Network Automation + 27 more

Projects

OpenTab | *TypeScript, Chrome DevTools Protocol, Tailscale VPC, WebSockets* **August 2026 – Present**

- Designed and built a reverse proxy which turns personal devices into REST/WebSocket servers serving Chrome tabs over CDP
- Incorporated OpenTab as a headful browser automation tool in **Sower**, serving traffic over a personal virtual private intranet

Harness | *TanStack Start, FastAPI, Convex, Daytona, Redis, Agent Client Protocol (ACP)* **January 2026 – June 2026**

- Built a custom **FastAPI** bridge over **Agent Client Protocol** that runs user-provided coding agents (CC/Codex) in isolated **Linux** sandboxes, streams tool calls and terminal output to the browser, supporting MCP Servers across user configured profiles
- Engineered multiplayer collaboration over **Redis Streams**, with permission-aware event redaction, enabling users to watch, co-drive, rewind, and fork others' agent sessions without exposing the owner's workspace environment

Awards: 2025 Qualcomm AI Hackathon Honor, COSCON Honor, 2026 New Jersey Press Foundation Awards: Web (1st)