

Arnav Arora

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EDUCATION

University of Michigan

Bachelor of Science in Computer Science & Mathematics, 3.7 GPA

Ann Arbor, MI

August 2023 – May 2027

- **Relevant Coursework:** Operating Systems, Distributed Systems, Web Systems, Computer Security, Databases, Machine Learning, Computer Organization, Data Structures & Algorithms, Probability, Linear Algebra, Information Theory, Discrete Math, Calculus I-IV
- **Involvement:** Calculus II Instructional Assistant, Michigan Poker Club Executive Board

EXPERIENCE

DoorDash

Software Engineer Intern

Seattle, WA

May 2026 – August 2026

- Engineered a backend-driven checkout experience in **Kotlin**, building client and cart evaluation logic; leveraged **Redis** to cache cart previews and bypass blocking **gRPC** calls, reducing p99 latency from >100ms to 5ms.
- Launched the feature to 50% of iOS users via A/B test, driving a **3.9% lift** in variable profit and a **1.4% increase** in DashPass signups.
- Engineered event-driven promotion and state-store logic in **Go** for a multi-step, cross-vertical DashPass campaign spanning 5+ consumer-facing in-app placements.
- Built **ETLExpress/Airflow** pipelines to automate enrollment for a **400K-user treatment cohort**, eliminating manual intervention for weekend execution.
- Spearheaded production readiness and Operational Readiness Review across 4 microservices, authoring E2E tests, leading cross-functional testing sessions, and building 5 **Grafana/Chronosphere** dashboards and 20+ alerts.

Defendermate

Software Engineer Co-Op

Seattle, WA (Remote)

August 2025 – December 2025

- Engineered a multimodal security analysis agent in **Python** using the **Claude API**, integrating live web search to autonomously investigate threat signals and surface detection gaps.
- Architected a hybrid RAG pipeline using **LangChain**, **Pinecone**, OpenAI embeddings, and **BM25** ranking, improving top-3 document relevance across internal threat datasets by **30%**.
- Engineered an **automated LLM evaluation framework** to systematically benchmark agent accuracy against **500+** ground-truth threat scenarios, eliminating **12 hours** of manual QA per week.

Fortis Healthcare

Software Engineer Intern

India (Remote)

May 2025 – August 2025

- Integrated Google Firebase and **MongoDB** into a **Swift** iOS app to establish OTP-based authentication, securing **5,000+** patient accounts; improved responsiveness via local caching and asynchronous background fetches.
- Implemented a dual-channel patient alert system using **Twilio's** REST API for SMS and **Apple Push Notification Service (APNs)**, reducing appointment no-shows by over **25%**.

PROJECTS

OS Threading Library | C++, Mutexes, Semaphores, Condition Variables

September 2025

- Implemented a user-level threading library in **C++** with CPU, thread, mutex, and condition-variable abstractions, supporting multi-CPU execution with preemptive scheduling via timer interrupts and cooperative yielding.

SolvEx: Exploitative Poker Solver | Python, JavaScript/TypeScript, React, AWS, SQL

May 2025

- Engineered a full-stack poker analysis platform using **React** and **PostgreSQL** to capture live hand histories and persistently track opponent tendencies.
- Integrated a custom CLI solver to parse JSON solve trees for game-theoretically optimal (GTO) baselines, leveraging the **OpenAI API** to generate natural-language exploitative adjustments.
- Deployed the platform to **100+ Michigan Poker Club members**, scaling strategic coaching and driving measurable improvements in aggregate win rates.

TECHNICAL SKILLS

Languages: C++, C, Java, Go, Python, JavaScript/TypeScript, Swift, Kotlin, SQL, ARM Assembly

Infrastructure & Cloud: Kubernetes, Docker, Airflow, Jenkins, Ansible, Redis, gRPC, AWS

Frameworks & Libraries: React, Node.js, Vue, Flask, LangChain, TensorFlow, NumPy, Pandas, Scikit-learn

Observability: Grafana, Chronosphere

Developer Tools: Linux, Git, Vim