Ayan Bin Saif

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Technical Skills

Languages:	Python, C, C++, TypeScript, JavaScript, Swift, Bash, Java, SQL, HTML/CSS
Frameworks:	Next.js, React, React Native, SwiftUI, Node.js, Tailwind CSS, OpenCV, MediaPipe
Tools:	Docker, Supabase, PostgreSQL, Firebase, Google Gemini, Git, Unix/Linux, Vercel, AWS
Core Concepts:	Multi-Agent Systems, RESTful API, OOP, Data Structures & Algorithms

Work Experience

TERN May 2026 — Present
Engineering Intern Austin, Texas, United States

- Engineering idps™, an ai-powered positioning stack that keeps navigation accurate without relying on gps, gnss, or cellular signals.

Apple Feb 2024 — Jul 2024
iOS App Developer (Mentorship) Toronto, Ontario, Canada

- Built native iOS features in Swift and SwiftUI as part of a selective technical Apple mentorship in iOS development, emphasizing performance optimization and scalable UI architecture.
- Architected EduBuddy, an iOS productivity app with a personalized recommendation engine; increased beta engagement by 30% through HIG-aligned UX design and performance optimization.
- Reduced UI load times by 400ms and memory usage by 25% via lazy loading, view hierarchy refactoring, and SwiftUI lifecycle optimization.
- Owned full SDLC from wireframing to TestFlight deployment; presented a technical demo to Apple iOS engineers and was selected for showcase among 200+ participants.

Projects

AlphaHedge | Next.js, TypeScript, Supabase, Google Gemini, Sim.ai Jan 2026

- Developed an AI-driven investment research platform generating structured multi-factor stock analysis reports in under 2 minutes, built at the Y Combinator Full-Stack Hackathon.
- Engineered a multi-agent council with 4 autonomous agents orchestrated via Sim.ai to independently analyze stocks and converge on ratings via weighted decision aggregation.
- Implemented a contextual RAG pipeline using Google Gemini API; reduced token overhead by 25% via sliding-window history pruning while retaining context.
- Built an asynchronous job-polling architecture for multi-agent workflows; engineered a UI that parses raw LLM outputs into styled badges and interactive financial tooltips.

Rate My Rez | React, Firebase, Tailwind CSS Nov 2025

- Engineered a full-stack housing review platform for University of Waterloo students using React and Firebase; reached 10,000+ unique visits in under 1 month of launch.
- Implemented secure serverless CRUD APIs with Firebase Auth and role-based access control for reviews, media uploads, and threaded Q&A.
- Reduced UI state recomputation by 60% through React memoization; maintained sub-100ms update latency via Firestore synchronization.

Education

University of Waterloo Waterloo, ON
Applied Mathematics with Scientific Computing and Scientific Machine Learning Present