

Ayan Bin Saif

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TECHNICAL PROFILE

Mathematics student at the University of Waterloo specializing in iOS development and Computer Vision. Experienced in building scalable mobile apps and HCI solutions using Swift, Python, and Java.

EDUCATION

University of Waterloo	Honours Bachelors of Mathematics (Co-op)	2025 — Present
		Expected Graduation: April 2030

TECHNICAL SKILLS

Languages:	Swift, Python, Bash, Java, JavaScript, Racket, HTML/CSS, SQL
Frameworks:	SwiftUI, UIKit, React, Tailwind CSS, MediaPipe, OpenCV, Node.js
Tools/Tech:	Unix/Linux (CLI), Git (Version Control), Firebase (Auth/Firestore), Xcode, Jira, NoSQL
Core Concepts:	Object-Oriented Programming (OOP), Data Structures, UI/UX Design, HCI

WORK EXPERIENCE

Apple — iOS App Developer (Mentorship)	Feb 2024 — Jul 2024
<ul style="list-style-type: none">Engineered native iOS applications using Swift and SwiftUI within an exclusive Apple-sponsored technical mentorship program.Architected ‘EduBuddy’ following Apple HIG, resulting in a 25% increase in perceived user navigation efficiency during beta testing.Managed the full SDLC from low-fidelity wireframing to final high-performance deployment in Xcode.Delivered a high-stakes technical demo to industry executives, highlighting feature scalability and memory management optimizations.	

PROJECTS

Rate My Rez React, Firebase, Tailwind CSS 	2025
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<ul style="list-style-type: none">Launched a full-stack housing platform utilizing React for the frontend and Firebase for real-time data persistence.Implemented secure serverless CRUD operations allowing users to manage reviews via Firebase Auth verification.Designed responsive UI components that ensured 100% layout consistency across mobile and desktop devices.	
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Cheeto-Fingers Python, OpenCV, MediaPipe 	2025
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<ul style="list-style-type: none">Developed a touch-free HCI mapping 21 hand-knuckle landmarks to OS mouse events using Vector Calculus.Engineered a jitter-buffering algorithm to stabilize cursor movement, reducing sensor noise by 90%.Built a custom gesture-recognition engine for media navigation, including precision scrolling and volume toggling.	
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Dice Duel Showdown Java, Python, JavaScript, HTML/CSS, Tailwind CSS 	2025
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<ul style="list-style-type: none">Architected a strategic turn-based game featuring a probability-driven AI opponent using weighted decision trees.Refactored a legacy Python prototype into a robust Java backend using OOP design patterns like inheritance.Deployed a web-based frontend with dynamic state management to track and visualize real-time battle logs.	
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