

Akaaljot Singh Mathoda

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EDUCATION

Simon Fraser University

Burnaby, BC

Bachelor of Applied Science, Computing Science, Minor in Statistics

Expected Grad Date – Dec 2027

- Concentration: Artificial Intelligence and Information Systems
- CGPA: 3.46, **Dean's Honour Roll (Twice)**
- Relevant Coursework: Systems Programming (CMPT 201), Data Structures and Algorithms (CMPT 307), Computer Architecture (CMPT 295), Distributed Systems

TECHNICAL SKILLS

Languages: C/C++, JavaScript/TypeScript, Python, Java/Kotlin, SQL, HTML, CSS

OS/Scripting & IDE: Android SDK, Unix/Linux, Visual Studio, IntelliJ, MacOS, Bash/zsh scripting

Frameworks/Libraries/API's: React.js, Next.js, Node.js, REST APIs, Spring Boot

Developer Tools: Git, Docker, Kubernetes, AWS, PostgreSQL, Redis, WebSockets, Postman

EXPERIENCE

Software Development Intern

May 2024 – July 2024

Golden Globe Education & Migration Consultants

Mohali, India

- Developed **5+** production features for a client-facing web application using **JavaScript, HTML, and CSS**
- Integrated **REST APIs** for dynamic data flow between frontend and backend services, improving scalability
- Refactored existing codebase reducing page load time by **20%** through performance optimization and code cleanup
- Authored **unit tests** to validate feature correctness, improving reliability across the workflow

PROJECTS

RizzervIT | *HTML, CSS, JavaScript, SQL, REST APIs, Spring Boot* | [Github](#)

Sept – Dec 2024

- Architected a full-stack event booking system with **MVC** architecture and **20+ HTTP GET/POST endpoints**
- Implemented secure user authentication using **BCrypt**, protecting against brute-force attacks over **HTTP**
- Developed **SQL queries** with normalized **OLTP** schema design, improving performance by **15%**
- Implemented **CI/CD-aligned** workflow and Collaborated in **Agile** sprints using **Git-based version control**

TeamBoxConquest | *Java, TCP Sockets, JavaFX* | [Github](#)

Jan – Apr 2025

- Designed a distributed **client-server architecture** in **Java** using raw **TCP/IP** sockets, handling **10+ concurrent clients** with a custom application-layer protocol over **TCP**
- Engineered concurrency-safe state management using **ReentrantLock** and atomic operations
- Optimized synchronization mechanisms achieving **sub-100ms latency**
- Implemented automated testing for protocol validation and edge-case handling

StudySage Website | *React.js, Next.js, JavaScript, Tailwind CSS, Vercel* | [Github](#) | [Website](#)

Aug – Dec 2025

- Developed a production-grade web application using **Next.js** and **TypeScript** with modular component architecture and responsive design
- Integrated **REST APIs** using structured data fetching, error handling, and state synchronization across pages
- Improved page performance by **30%** through optimized rendering strategies and component restructuring
- Deployed via **CI/CD pipeline** to cloud infrastructure ensuring reliable builds and version control integration

StudySage | *Kotlin, Android SDK, Jetpack Compose, Firebase* | [Github](#) | [Website](#)

Aug – Dec 2025

- Co-developed a production-scale Android application with **30+ Jetpack Compose screens**
- Integrated **WebSocket-based real-time multiplayer features** with less than **50ms latency**, handling session management, concurrent game state updates, and leaderboard synchronization
- Implemented **NoSQL** secure authentication and cloud data persistence using **Firebase Auth and Firestore**
- Debugged UI state inconsistencies and concurrency issues across **90 concurrent threads**

DermaScan AI | *Python, PyTorch, AWS, SQL*

Aug – Dec 2025

- Developed a deep learning system for skin lesion classification using PyTorch on **10K+ images** for early detection
- Engineered pipelines for data preprocessing, augmentation, and model training, improving generalization by **20%**
- Achieved **90%+ accuracy** on benchmark test splits through hyperparameter tuning and model evaluation
- Deployed scalable inference services on **AWS EC2** with **Amazon S3** integration for batch processing