

Manpreet Singh

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Education

Wilfrid Laurier University

Master of Applied Computing (Co-op)

Sep 2025 – Present

GPA: 3.9 / 4

Chitkara University

Bachelor of Engineering (Computer Science)

Jul 2021 – Aug 2025

GPA: 3.7 / 4

Work Experience

CoreAI Technologies

Software Developer

Jun 2025 – Dec 2025

Remote

- Built health tracking dashboard backend API with **Next.js** and **TanStack Query** for optimized data fetching and caching, visualizing biomarker trends with customizable pinning, target thresholds, and metric categorization.
- Developed Health Snapshot categorization system organizing biomarkers across blood, cardiovascular, and performance metrics with detailed information pages, simplifying health tracking workflows.
- Implemented guest PIN access feature in production Android Smart Lock app using **Kotlin** and **Seam SDK**, enabling temporary door access with NFC authentication, PIN validation, and expiration handling logic.

SalesCode.ai

Software Engineer Intern

Jun 2024 – Dec 2024

Gurugram, India

- Built geo-targeted advertisement banner system using **Spring Boot** backend with RESTful APIs, **MySQL**, **AWS S3** for banner storage, deployed on **AWS EC2** with auto-scaling, serving 100K+ sales reps, achieving 15% higher CTR.
- Optimized **Flutter** app performance through widget refactoring and lazy loading patterns, reducing memory footprint from **89MB** to around **62MB**, improving overall app performance.
- Collaborated with 5 engineers in **Agile** sprints to deliver 5+ production **Flutter** features, implementing **unit tests** and incorporating code review feedback reducing post-release bugs.

Projects

Qure | Frontend | Backend

Node.js, Express.js, React Native, PostgreSQL, Socket.IO, Redis, Docker

- Developed **Node.js/TypeScript** backend for clinic queue management system with RESTful APIs, role-based access control for patient, staff, and administrator workflows with **JWT**-based authentication and session management.
- Engineered real-time queue system using **Socket.IO** room-based architecture for instant updates and implemented fault-tolerant token management using atomic **PostgreSQL** transactions to prevent race conditions.
- Designed **PostgreSQL** schema with **Prisma** ORM implementing indexed queries for optimization, built asynchronous job pipeline using **BullMQ** and **Redis**, containerized with **Docker**, deployed to **Render** with automated migrations.

Study Adda | Demo | Source Code

React.js, MongoDB, Express.js, Node.js, Javascript

- Built LMS backend using **Node.js**, **Express.js**, and **MongoDB** with RESTful APIs, **JWT** authentication, **Razorpay** payment integration, video streaming endpoints, instructor analytics aggregation, and discounts logic.
- Implemented course creation, enrollment tracking, progress monitoring APIs, and **Cloudinary** for media management.

MyTrackr | Source Code

Java, XML, Android, Firebase, Gemini SDK, ML Kit, Cloudinary

- Developed expense tracking app with **Firebase** backend integration, **ML Kit** OCR, and **Gemini AI** for receipt scanning with alarm-based notifications, reducing manual data entry time by 80% and improving categorization accuracy.
- Implemented real-time expense aggregation, multilingual support, CSV/PDF export, cloud-synced receipt storage, and comprehensive **JUnit** test coverage for backend integration logic.

Technical Skills

Languages: JavaScript, TypeScript, Java, Python, Kotlin, SQL, C++, Bash/Zsh

Backend Frameworks: Node.js, Express.js, Spring Boot, Prisma ORM, Drizzle ORM

Frameworks & Libraries: React.js, Next.js, React Native, Flutter, Android SDK

Databases: PostgreSQL, MongoDB, Firebase, Redis, MySQL

Tools & Technologies: AWS (EC2, S3), Docker, Socket.IO, BullMQ, Git, Jira

Core Competencies: RESTful API Design, Database Design & Optimization, Real-time Systems, Authentication & Authorization, Microservices Architecture, Asynchronous Processing, Unit Testing (Jest & JUnit)