

# MANPREET SINGH

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## EDUCATION

### Wilfrid Laurier University

Master of Applied Computing (Co-op)

Sep 2025 – Apr 2027

GPA: 3.9 / 4

### Chitkara University

Bachelor of Engineering (Computer Science)

Jul 2021 – May 2025

GPA: 3.7 / 4

## WORK EXPERIENCE

### CoreAI Technologies

Jun 2025 – Dec 2025

*Software Developer*

*Remote*

- Engineered a health dashboard using **Next.js** and **TanStack Query**, optimizing data fetching via custom caching and visualizing biomarker trends with interactive **Recharts** components.
- 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 in Android Smart Lock app using **Kotlin** and **Seam SDK**, enabling temporary door access with NFC authentication, PIN validation, and expiration handling.

### SalesCode.ai

Jun 2024 – Dec 2024

*Software Engineer Intern*

*Gurugram, India*

- Built geo-targeted banner system with **Spring Boot (Java)** backend, **Flutter** widgets, **AWS S3** storage, and **EC2** deployment with auto-scaling, serving 100K+ sales reps and 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/Scrum** 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 full-stack clinic queue system with **Node.js/TypeScript** backend, **React Native** mobile app, role-based access for patient, staff, and admin workflows, with **JWT** authentication.
- Engineered real-time queue system with **Socket.IO** room-based architecture achieving **<100ms latency**; implemented fault-tolerant token management via atomic **PostgreSQL** transactions to prevent race conditions.
- Built asynchronous job pipeline with **BullMQ** and **Redis** for **Cloudinary** uploads, reducing upload latency by **70%**. Containerized with **Docker** and deployed on **Render** cloud platform.

MyTrackr | [Source Code](#)

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

- Developed Android expense tracking app using **ML Kit** OCR and **Gemini AI** for automated receipt scanning with **AlarmManager** based expiry notifications, reducing manual data entry time by 80%.
- Implemented automated budget tracking with real-time expense aggregation, multilingual support, CSV export, cloud-synced **Cloudinary** receipt storage, and comprehensive **JUnit** test coverage.

Study Adda | [Demo](#) | [Source Code](#)

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

- Built student and instructor portal LMS using **React.js, Node.js, Express.js**, and **MongoDB** with **JWT** auth, **Razorpay** payments, video streaming, instructor analytics, and time-based discounts.
- Implemented course creation workflow, student enrollment tracking, video progress monitoring with playback tracking, and **Cloudinary** media management for lecture uploads.

## LEADERSHIP & ACTIVITIES

**SKILLVARZ 1.0 Hackathon** | *Semifinalist*

May 2025

- Built immersive 3D web experiences ([Food Drone](#) delivery simulation and [Amaya Cafe](#)) using **Three.js, React Three Fiber**, and **GSAP**, collaborating with a 5-member team.

**Google Developer Student Clubs (GDSC), Chitkara University**

Dec 2022 – Feb 2024

- Coordinated event planning, venue setup, and resource allocation for technical hackathons and events with 100+ participants.

## TECHNICAL SKILLS

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

**Frameworks & Libraries:** React.js, Next.js, Node.js, Express.js, React Native, Flutter, Spring Boot, Android SDK, Three.js, React Three Fiber, GSAP, Tanstack Query, Prisma

**Databases:** PostgreSQL, MongoDB, Firebase, Redis

**Tools & Technologies:** AWS (EC2, S3), Docker, Git, Jira, BullMQ, Socket.IO, RESTful API Design, Junit & Jest

**Core Competencies:** Real-time Systems, Mobile Development, Full-Stack Development, Database Design & Optimization, Data Structures & Algorithms, 3D Web Graphics