

# 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

Jun 2025 – Dec 2025

*Software Developer*

*Remote*

- Built health tracking dashboard with **Next.js** and **TanStack Query** for data fetching and caching, visualizing biomarker trends using **Recharts** 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

Jun 2024 – Dec 2024

*Software Engineer Intern*

*Gurugram, India*

- Built geo-targeted banner system using **Spring Boot** backend with **AWS S3** storage and **EC2** deployment with auto-scaling, and custom **Flutter** widgets, 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 features, implementing **unit tests** and incorporating code review feedback reducing post-release bugs.

## Projects

**Qure** | *Frontend* | *Backend*

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

- Developed full-stack clinic queue management system with **Node.js/TypeScript** backend, **React Native** mobile app, and role-based access supporting patient, staff, and administrator workflows with **JWT**-based authentication.
- 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**, and deployed on **Render**.

**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.

**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 alarm-based expiry notifications, reducing manual data entry time by 80%.
- Implemented budget tracking with real-time aggregation, CSV/PDF export, cloud storage, and **JUnit** test coverage.

## Technical Skills

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

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

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

**Tools & Technologies:** AWS (EC2, S3), Docker, Git, Jira

**Core Competencies:** Full-Stack Development, RESTful API Design, Database Design & Optimization, Real-time Systems, Authentication & Authorization, Unit Testing (Jest & JUnit)