Manpreet Singh

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Education

Wilfrid Laurier University	**Sep 2025 – Present**
Master of Applied Computing (Co-op)	GPA: 3.9 / 4
Chitkara University	**Jul 2021 – Aug 2025**
Bachelor of Engineering (Computer Science)	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 advertisement banner system using **Spring Boot**, custom **Flutter** widgets, **AWS S3** for banner storage, and 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 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.
- Built asynchronous job processing pipeline using **BullMQ** and **Redis** for **Cloudinary** image uploads, containerized with **Docker** and **Docker Compose** for local development, and deployed to **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, reducing manual data entry time by 80% and improving expense categorization accuracy.
- Implemented automated budget tracking with real-time expense aggregation, multilingual support, CSV/PDF export, and cloud-synced receipt storage, simplifying financial management for users.

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, enrollment tracking, progress monitoring, and **Cloudinary** media management.

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, Tanstack Query

Databases: PostgreSQL, MongoDB, Firebase, Redis

Tools & Technologies: AWS (EC2, S3, ECR), Docker, Git, Jira, Slack, Word, Excel

Core Competencies: RESTful API Design, Real-time Systems, Mobile Development, Microservices Architecture, Database Design, Data Structures & Algorithms, Object-Oriented Design, Unit Testing (Junit & Jest)