# Manpreet Singh

#### Education

Wilfrid Laurier University

Master of Applied Computing (Co-op)

Sep 2025 – Present (April 2027)

Waterloo, Ontario, Canada

Chitkara University

July 2021 – August 2025

Bachelor of Engineering (Computer Science)

CGPA: 9.23

### Work Experience

SalesCode.ai

June 2024 – December 2024

Software Engineer Intern

• Developed and deployed Smart Advertisement Banners featuring geo-location targeting and personalized

- Developed and deployed Smart Advertisement Banners featuring geo-location targeting and personalized recommendations for 500+ sales representatives, resulting in a 25% increase in user engagement, 15% higher click-through rates, and improved promotion visibility across the market.
- Enhanced Flutter application **performance** by refactoring 15+ reusable widgets and implementing lazy loading on HomeScreen, reducing app startup time by 30%, decreasing memory consumption by 40MB, and improving widget rebuild efficiency by 60%.
- Created and delivered a Skill Dashboard analytics module in **Flutter** for **500**+ sales representatives, providing real-time insights on 4 key performance metrics, leading to a **20**% improvement in team productivity.

## **Projects**

MyTrackr - Receipt and Budget Manager | Source Code

Java | Android SDK | Firebase | ML Kit

- Building an Android application in **Java** with **Firebase Authentication** (Google SSO), **Firestore database**, and **Firebase Storage** for receipt scanning, cloud-based storage, and personal budget tracking.
- Integrating Google ML Kit OCR for real-time text recognition from camera and gallery images, extracting structured data (store, items, prices) and applying AI-powered formatting to standardize receipts across 10+ layouts.
- Developing budget management with automatic expense tracking, monthly monitoring, spending alerts, **AI-driven** savings tips, and **PDF export** for tax filing and records.

Study Adda | Demo | Source Code

ReactJS | MongoDB | Express.js | Node.js

- Architected a full-stack **MERN** EdTech platform with **RESTful API** architecture, **MongoDB** database, **Express.js** backend, and **React.js** frontend, implementing a 3-tier architecture for scalability and optimized performance with **2-second** page load times.
- Implemented a student portal with **JWT** authentication, **Razorpay** payment gateway integration, advanced course filtering across **10**+ categories, and **Cloudinary** video streaming for seamless content delivery.
- Built an instructor dashboard with full CRUD operations for course management, Chart.js visualizations for enrollment analytics, revenue tracking features, and a dynamic discount system with time-based pricing controls.

#### Facial Recognition Attendance System | Source Code

Pandas | Tkinter | NumPy | Python

- Engineered a facial recognition attendance system using Python, OpenCV, and a face recognition library, achieving 95% facial detection accuracy, with NumPy for image processing and Pandas for attendance record management with CSV export.
- Designed a **Tkinter** desktop GUI with a student registration module and real-time camera feed for live facial detection, reducing attendance logging time by 85%.

#### Technical Skills

Languages: Java, JavaScript, TypeScript, Python, Dart, SQL, C++, HTML5, CSS, XML

Developer Tools: Git, GitHub, Android Studio, Maven, Gradle, Postman, Jira, Confluence, Firebase, Prisma, Supabase

Libraries/Frameworks: Spring Boot, Android SDK, React.js, Next.js, Node.js, Express.js, React Native, Flutter, PostgreSQL, MongoDB, Pandas, NumPy

Core Competencies: Data Structures and Algorithms, Object-Oriented Design, RESTful API Development, Database Design, Agile/Scrum, Problem Solving