VAIBHAVI JAIN

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EXPERIENCE

Application Developer Intern — **July 2025 – September 2025**
Humble Coders — *Patiala, Punjab*

- Implemented secure **Firebase Authentication** with **user registration, login, session management, and password reset** for Android applications.
- Developed responsive and reusable UI screens using **Kotlin** and **Jetpack Compose**, following modern Android development practices.
- Applied the **MVVM architecture** to build modular, maintainable, and scalable Android application components.

PROJECTS

Veridex | **Python, BM25, FAISS, FastAPI, React.js** — **GitHub**

- Engineered an **evidence-grounded candidate ranking system** for **100,000 candidates** using hybrid **BM25 + FAISS retrieval**, reducing the search space to a top-3,000 shortlist.
- Designed a **two-layer scoring and MMR reranking framework** with 56 deterministic features and adversarial-profile defenses, ranking the full 100K candidate pool in **34 seconds on CPU**.

Converge | **React.js, TypeScript, FastAPI, WebSockets, PostgreSQL, MongoDB** — **GitHub**

- Built a **real-time collaborative code editor** using **React.js, CodeMirror, FastAPI, and WebSockets**, enabling multiple users to edit the same document simultaneously with live cursor and selection synchronization.
- Implemented a custom **RGA-based CRDT engine from scratch** for conflict-free concurrent edits and deterministic merging, with PostgreSQL operation logging to reconstruct documents after server restarts.

ScholarFlow | **Flask, React.js, NLP, Supabase** — **GitHub**

- Developed a full-stack **document analytics platform** using **Flask, React.js, and Supabase** for automated PDF processing, authentication, cloud storage, and structured research insight extraction.
- Optimized **NLP inference pipelines** to process research papers in **10–30 seconds** while maintaining high-quality information extraction and scalable analytics workflows.

TECHNICAL SKILLS

Languages: C, C++, Python, Java, SQL, Kotlin, Dart, HTML/CSS
Frameworks/Libraries: React.js, Node.js, Firebase, Jetpack Compose
Machine Learning/AI: PyTorch, TensorFlow, OpenCV, NumPy, Pandas, Scikit-learn, NLP, Vision Transformer (ViT), RAG, n8n
Databases/Tools: MySQL, MongoDB, Supabase, Git, GitHub, VS Code, Linux, AWS
Coursework: Data Structures & Algorithms, OOP, DBMS, AI, Operating Systems, Computer Networks

EDUCATION

Bachelor of Technology, Computer Engineering — **Current CGPA: 8.57**
Thapar Institute of Engineering and Technology — *Patiala, Punjab*

Higher Secondary (Science Stream) — **ISC XII Percentage: 95.25%**
St. Patrick's Junior College — *Agra, Uttar Pradesh*

ACHIEVEMENTS

- Winner of **Agentic AI Hackathon** (April 2026) for building an automation workflow using **n8n**. — **GitHub**
- Built and published a **TOPSIS Python package on PyPI**, implementing multi-criteria decision analysis with reusable CLI support, input validation, and automated ranking of alternatives. — **GitHub**
- Won **First Place** in the **Clinical/Engineering Oral & Poster Presentation** category at the **Pediatric Epilepsy Research Symposium** (PGIMER Chandigarh & Academy of Pediatric Neurology, April 2026).
- Solved **400+** data structures and algorithms problems on **LeetCode** across topics including **dynamic programming, graphs, and greedy algorithms**.

POSITIONS OF RESPONSIBILITY

Technical & Marketing Representative — **April 2024 – Present**
Microsoft Learn Student Chapter — *Patiala, Punjab*

- Led initiatives across **marketing and technical domains**, increasing community engagement and event participation.
- Coordinated the planning and execution of the chapter's flagship technical events, driving outreach and impact.