

# Ekansh Kumar

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## EDUCATION

**Bachelors of Technology (B. Tech) in Computer Science and Engineering** | *Aug 2023 – Aug 2027*  
**CGPA 9.02**

Vellore Institute of Technology - Pre-Final Year

**Senior Secondary | Grade 93%**  
Presidium School, Sector 57, Gurugram

*Mar 2022*

**Secondary | Grade 90.8%**  
Presidium School, Sector 57, Gurugram

*Mar 2020*

## PROJECTS

### TraceMind (AI + Blockchain Supply Chain Integrity System)

*Feb 2026*

*FastAPI, Isolation Forest, Flutter, Next.js, Supabase, PostgreSQL, Ethereum (ERC-721)*



- Built a full-stack AI + Blockchain platform for pharmaceutical supply chain monitoring with **200ms real-time anomaly detection**.
- Implemented hybrid fraud detection using **Isolation Forest** and velocity-based GPS analysis.
- Designed scalable microservices architecture with on-chain ERC-721 provenance tracking.

### NeuroSentinel (AI Diagnostic System)

*Feb 2026*

*Python, Vosk, Random Forest, Streamlit, SMOTE, Scikit-learn*



- Developed a non-invasive AI system for early Alzheimer's detection using a **9-parameter neurological fingerprint** across speech-based biomarkers.
- Built a real-time pipeline integrating **Vosk** and a **Random Forest classifier**, improving diagnostic accuracy from **67% to 84.21%** with SMOTE balancing and hyperparameter tuning.
- Engineered feature extraction pipeline analyzing linguistic, acoustic, and prosodic speech biomarkers.

### InvisibleQR (Hackathon Winning App)

*Sep 2025*

*Swift, Supabase, PostgreSQL, CoreML*



- Won the iOS Fusion 8.0 Hackathon by rapidly developing a software prototype for secure, texture-based communication using **Swift** and **CoreML**.
- Integrated a backend using **Supabase** and secured data transmission with **AES-256 encryption**, incorporating principles of cryptographic protocols.

## ACHIEVEMENTS

- **HackSphere Hackathon – 2nd Place (Yantra Week 2026)** for NeuroSentinel.
- **iOS Fusion 8.0 Hackathon Winner (2025)** – VIT Gravitas.
- **Flipkart GRiD 7.0 Semi-Finalist (2025)** – Advanced among **160,000+** participants. [🔗](#)

## CERTIFICATIONS

- **GEN AI Using IBM Watsonx (2025)** – IBM Career Education Program. [🔗](#)

## KEY SKILLS

**Languages:** C++, Python, C, Java, Swift, JavaScript

**AI/ML:** Machine Learning, Anomaly Detection, Isolation Forest, Random Forest, NLP, XGBoost, LSTM, SMOTE, Feature Engineering, Model Optimization, LLMs (DistilGPT-2), CoreML

**Systems & Tools:** Supabase, Streamlit, Microservices, FastAPI, REST APIs, Ethereum (ERC-721), Flutter, Next.js, Git, GitHub

**Core CS:** Data Structures & Algorithms, Computer Networks, Computer Architecture, OOPs