

PAVAN KUMAR R

+91 9380365439 | pavan1ga22ai032@gmail.com | [GitHub](#) | [LinkedIn](#) | [Portfolio](#)

◆ PROFESSIONAL SUMMARY

Final-year B.E. student in AI & ML (CGPA: 9.63/10) with hands-on experience building end-to-end AI systems across computer vision, NLP, quantum ML, and full-stack web development. Skilled at translating research into deployed applications. Participated in 6+ hackathons and national-level challenges. Seeking a role to contribute to meaningful AI/ML projects within a collaborative team.

◆ EDUCATION

Global Academy of Technology, Bengaluru
B.E. — Artificial Intelligence & Machine Learning
CGPA: 9.63 / 10 (Upto 7th Sem) 2022 – 2026
A.M.S Pre-University College
PCMB — 94.66% 2020 – 2022
JnanaVardhaka English School
SSLC — 91% 2019 – 2020

◆ TECHNICAL SKILLS

Languages: Python, C, Java, JavaScript (ES6+), TypeScript, HTML5, CSS3
AI / ML: TensorFlow, Keras, PyTorch, scikit-learn, Qiskit, OpenCV, LSTM, CNN (ResNet/EfficientNet).
Generative AI: Prompt Engineering, Agentic AI, RAG
Web & Backend: React 18, Node.js, PostgreSQL, MySQL, WebSocket, REST API, JWT, TailwindCSS
Tools: Git, GitHub, Jupyter, Google Colab, VS Code, Tableau, TF.js, Pandas, NumPy

◆ FEATURED PROJECTS

[Audio-Spectrogram Depression Detection via Quantum ML](#) | [Live UI](#)

Python · TensorFlow · Qiskit · React

- ◆ **Developed** a hybrid quantum-classical pipeline: ResNet/EfficientNet CNNs → PCA → QSVC (ZZFeatureMap kernel) for psychiatric pattern extraction beyond classical CNN limits on DIAC-WOZ.
- ◆ **Outperformed prior baseline benchmarks** with **93.48% accuracy** via custom ACO, PSO & Leaf-in-wind (LiW) optimizers — the first known application of nature-inspired quantum hyperparameter tuning to audio-based clinical depression screening.
- ◆ **First known application** of nature-inspired quantum hyperparameter tuning (ACO, PSO, LiW) to audio-based clinical screening — with an interactive React UI enabling clinicians to run inference without ML expertise.

[StockVerse — AI-Powered Financial Intelligence Platform](#)

React 18 · Node.js · PostgreSQL · TensorFlow.js

- ◆ **Built** an 8-module financial platform with real-time WebSocket streaming (5–30s) — **live market data, AI sentiment, portfolio, options flow, ETF analytics & LLM chatbot.**
- ◆ **Implemented** TF.js LSTM + Random Forest + Gemini AI fusion with **80% API cache hit rate**; JWT-secured Node.js backend + 15-table PostgreSQL schema for predictions, transactions & portfolio.
- ◆ **Unique hybrid intelligence layer:** fuses client-side TF.js LSTM, Random Forest signals, and Gemini AI sentiment into a unified explainable confidence score with PDF/CSV export — all rendered in-browser.

[DrowsyAIGuard — Real-Time Driver Safety System](#)

React 18 · TensorFlow.js · MediaPipe

- ◆ **Built** a context-aware drowsiness detection PWA fusing Eye Aspect Ratio, custom CNN & multi-modal sensors — achieving **95% detection accuracy** across 7 modules with weather-adaptive, time-of-day-sensitive alert thresholds.
- ◆ **Slashed false positives by 18%** via conformal prediction + Monte Carlo Dropout; zero-lag Web Worker inference; offline-first via Service Workers & IndexedDB.
- ◆ **Fully offline-capable safety PWA:** runs entirely in-browser via Web Workers — alert thresholds adapt to weather and time-of-day; gamification and route risk scoring sustain driver engagement beyond passive alerts.

More Projects: [OSINT](#) · [IPL Data Analysis](#) · [StudFeed](#) · [MediScan-X](#) · [StoryTeller-AI](#) · [VisionLynx](#) · [AimlVoice](#)

◆ ACHIEVEMENTS & CERTIFICATIONS

- ◆ **Won** ENIGMA 2.0 Hackathon & secured 1st place in AI Engineer Mock Competition; earned 3rd Prize at Open Day Project Showcase; recognized as Outstanding Performer in Placement Training. [View Proof →](#)
- ◆ **Participated** in 6+ consecutive 24-hour hackathons; ranked **Top 5 in GeeksforGeeks** College-Level Problem Solving; showcased Bhuvan AquaGrow (IoT + AI smart irrigation) at SAP Labs, Manthan & Yukthi national challenges.
- ◆ **Earned** 4+ Infosys Springboard Certifications (Python, ML, Data Visualization), 2+ Scaler Certifications (Machine Learning & Deep Learning), YBI Foundation Python & ML Certification (Jun 2024). [View Certificates →](#)
- ◆ **Participated** in workshops on Python Full Stack Development (React.js), CPU-OS Simulator, and NLP — gaining practical exposure to web pipelines and systems programming.

◆ ADDITIONAL INFORMATION

Languages: English (Professional), Kannada (Native), Telugu (Mother Tongue), Hindi (Conversational).

Cultural Achievements: Secured 1st prize in 3 cultural events (Mime & Theatre); actively engaged in acting, anchoring, debate, and creative writing in Kannada literature.

Community: Active member of FOLK – ISKCON Bangalore Youth Wing; passionate about teaching and mentoring peers in AI/ML concepts, contributing to a culture of collaborative learning.

Interests & Philosophy: Deeply curious about geopolitics, history, and current affairs; practitioner of Vāgchāturatā (Kannada eloquence).

[View Cultural Achievements →](#)