THILAK KUMAR V

AI Engineer • Machine Learning Researcher

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EDUCATION

B.Tech
Artificial Intelligence and Machine Learning
Rajalakshmi Engineering College, Chennai, India
2022-2026 | CGPA-7.74/10

HSC & SSLC
Sindhi Model Senior Secondary School, Chennai, India
SSLC-2020 | HSC-2022

TECHNICAL SKILLS

Languages:
Python, Java, SQL, JavaScript, HTML/CSS

Frameworks:
TensorFlow, PyTorch, OpenCV, Scikit-learn, React, Flask

Tools:
MongoDB, Git, Docker, Hugging Face Spaces

Domains:
Machine Learning, Deep Learning, NLP, Computer Vision

ACHIEVEMENTS

- 1st Place, National Paper Presentation — Adhiyamaan College
- 2nd Place, Project & Poster Presentation — Veltech University
- Student Peer Evaluator at Tech Star Summit 2025 — SIMATS
- Selected as LinkedIn Campus Ambassador for 2025

CERTIFICATIONS

- Machine Learning Specialization — DeepLearning.AI
- Deep Learning Essentials — LinkedIn Learning
- RPA Citizen Developer — UiPath
- Google AI Essentials — Google
- Cloud Computing — NPTEL

PROFILE SUMMARY

Final-year AIML student with strong hands-on experience in Machine Learning, Deep Learning, NLP, and Computer Vision. Skilled in building scalable AI systems, research-grade models, and production-ready prototypes. Passionate about applying AI to real-world challenges through innovative, ethical, and data-driven solutions. Actively seeking an AI/ML internship to contribute engineering, research, and analytical expertise.

RESEARCH EXPERIENCE

Research Intern — NIT Silchar
June-Aug 2025

Worked on Explainable Forecasting for Patient Vital Sign Monitoring using hybrid AI techniques.

- Developed forecasting models combining physiological time-series data with emotion-based pain recognition.
- Implemented Random Forest, Gradient Boosting, MobileNetV2 architectures for multimodal learning.
- Applied SHAP and Grad-CAM to visualize model reasoning and enhance transparency.

KEY PROJECTS

NeuroLingo – Smart Brain Health Test
React, Flask, IndicBERT, Whisper, PyTorch

- Built a multilingual cognitive assessment system for early detection of memory/attention impairments.
- Integrated IndicBERT for regional language understanding and Whisper for speech recognition.
- Achieved high test accuracy for Tamil/Telugu assessments, improving accessibility for rural healthcare.

Malware Detection using GANs & Transfer Learning
Python, TensorFlow, VGG19

- Converted malware binaries into grayscale images for deep feature learning.
- Used GAN-based augmentation to address dataset imbalance and generate adversarial variants.
- Achieved 94% accuracy, outperforming traditional ML models in robustness and detection.

RESEARCH PUBLICATIONS

- Enhancing Education Through ML — *ICFTS 2025*
- Efficient Malware Detection using Transfer Learning & GANs — *AIMLA 2025*
- Hybrid Privacy-Preserved Image Representation — *ICCSP 2025*
- Face Recognition–Based Attendance System — *ICSCDS 2025*
- Quantum Key Distribution for Autonomous Vehicle Security — *Nova Publishers*