

Dachapalli Bhavashesh

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EDUCATION

SRM Institute of Science and Technology

B.Tech in Computer Science and Engineering, Chennai, Tamil Nadu

Aug 2023 – Present

CGPA: 9.56/10

EXPERIENCE

Samsung Prism R&D Intern

Samsung R&D Institute India, Bangalore

March 2025 – Present

Remote, India

- Built a multimodal deepfake detector using Swin-v2 and HuBERT with cross-attention, achieving over 94% accuracy.
- Applied Grad-CAM, FFT, and contrastive learning for interpretable detection of audio-visual forgeries.
- Extracted rPPG pulse, blink rate, and GAN fingerprints to capture physiological and spectral anomalies.
- Optimized training with mixed-precision, multi-GPU setup, and automated hyperparameter tuning.

PROJECTS

DeepFake Audio-Video Detection | Python, PyTorch, Swin Transformers, Wav2Vec2, EfficientNet, OpenCV

- Extracted multimodal features using facial landmarks, rPPG, blinks, and Wav2Vec2 embeddings.
- Applied cross-modal transformers with ELA, FFT-based forensics, and temporal attention for manipulation detection.
- Achieved 94% accuracy on face swap, lip-sync, and audio deepfakes using fused embeddings and mixed-precision.

AgriSync – AI-Driven Smart Farming Platform | React, FastAPI, TensorFlow, Solidity

- Built real-time plant disease detection (EfficientNetB4 + OpenCV) with 94.2% accuracy and 0.93 F1.
- Forecasted crop prices using XGBoost with time-series decomposition; reached R^2 of 0.87 and reduced MAPE to 6.8%.
- Integrated Ethereum smart contracts via Web3.js for crop trading with escrow logic and SHA-256-based traceability.

LogiStream – Real-Time Logistics Intelligence | Python, Pathway, FAISS, Hugging Face Transformers, React

- Developed a real-time RAG with Pathway ETL; delivered sub-second queries and 99.7% accuracy on 10,000 updates.
- Engineered anomaly detection with FAISS and transformers; flagged fraud and safety risks with 93.4% precision.
- Built FastAPI and React dashboards with Tailwind and Chart.js; enabled T+0 ingestion and <500ms responses.

RoomiePay – Smart Expense Manager | React, MySQL, Python, JWT

- Built a full-stack expense tracker with React, Python, and MySQL supporting real-time updates and secure workflows.
- Designed normalized schemas with triggers and resets to ensure precise, auditable expense records each month.
- Implemented invite-based group joins and dual-confirmation payments for reliable roommate collaboration.

TECHNICAL SKILLS

Languages: C, C++, Java, Python, JavaScript, Dart

Databases & Cloud: MySQL, MongoDB, Firebase, AWS SageMaker, EC2, S3, Vercel, Docker

Tools & Frameworks: React.js, Tailwind CSS, HTML5, Figma, RESTful APIs, GitHub, CI/CD Pipelines

Machine Learning & Deep Learning: PyTorch, TensorFlow, Keras, Hugging Face, spaCy, Scikit-learn, OpenCV, Pandas, NumPy, Matplotlib

Embedded Systems & IoT: Arduino, ESP32, IoT Sensors, Raspberry Pi

EXTRACURRICULAR

Hackathon Achievements

Participant & Winner

2024 – 2025

India

- Secured Top 3 position in **Red Bull Basement Hackathon**, creating a real-world tech solution.
- Won 2nd Runner-Up in national-level **Enduraverse'25 Hackathon**, selected among top 6 teams across India.
- Qualified the Internal Round for **Smart India Hackathon 2024** with a functional and scalable project.
- Top 10 Finalist among 5k+ applicants in **TEM-E-THON'25 Hackathon**.

Certifications

GitHub & AWS Credential Holder

2023 – 2025

Online

- GitHub Foundations
- Introduction to Generative AI (AWS Educate)
- Machine Learning Foundations (AWS Educate)
- Supervised Learning (DeepLearning.AI).