MAHESWARAN S

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EXECUTIVE SUMMARY

A Machine Learning enthusiast with demonstrated leadership capabilities and a strong academic foundation in problem-solving. Proven ability to lead team projects and manage complex initiatives from conception to execution. Eager to apply intermediate ML knowledge and a passion for innovation to solve challenging, data-driven problems.

PROJECTS

MedLeaf – Medicinal Leaf Recognition System **Aug 2023 - Oct 2023**

- Enhanced a CNN-based system for recognizing medicinal plant leaves using Python, OpenCV and TensorFlow.
- Achieved 95% accuracy with data augmentation and transfer learning.
- Integrated real-time recognition with improved model training by 98%.

Predictive Maintenance for EV Batteries **Jun 2025 - Oct 2025**

- Engineered an EV Battery Anomaly Detection System using Python and the CALCE dataset, implementing an Isolation Forest/Autoencoder model to predict incipient failures.
- Achieved 94% prediction accuracy in virtual environments for faults like capacity fade, significantly reducing potential thermal runaway risks and downtime.
- Developed a full ML pipeline for time-series data, covering feature engineering from raw voltage/current data to model validation, a scalable solution for real-time BMS integration.

Finshield - Proactive Digital Fraud Defense **Aug 2025 - Sept 2025**

- Refined a comprehensive fraud detection platform integrating multiple AI models to enhance investor security.
- Implemented a deepfake media detector using TensorFlow and OpenCV with 85% accuracy, alongside models for real-time transaction and communication (SMS/URL) fraud.
- Presented the integrated solution as a prototype for mitigating multi-channel security threats in the financial ecosystem.

EDUCATION

Integrated Master of Technology **Jun 2022 - Jun 2027**
Major: Artificial Intelligence - CGPA 8.55
VIT Bhopal University

- Co-authored a research paper on a novel deep learning approach for accurate obesity detection by leveraging synthetic image data

ADDITIONAL INFORMATION

- **Technical Skills:** Python, TensorFlow, OpenCV, LangGraph, DSA, NLP
- **Certifications:** ·Applied Machine Learning in Python (Coursera), Cloud Computing (NPTEL), Machine Learning (Finlatics)
- **Activities:** Experienced competitor in multiple AI/Security Hackathons (SEBI, Shell, Global MCP, D3CODE 2025), Developed an AI Agentic solution that earned Finalist status at the NASSCOM Hackathon.