NEHA THOMAS

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EDUCATION

University of Southern California **Aug 2025 - May 2027**
Master of Science, Computer Science Los Angeles, CA
Rajagiri School of Engineering & Technology **Nov. 2021 - May 2025**
Bachelor of Technology (Honors), Information Technology Kerala, India
GPA: 9.47/10

SKILLS

Programming:	Python, R, C, Java, JavaScript, HTML/CSS
Web frameworks:	React, Node, Express, Flask, RESTful APIs, Figma, React Native, UI, UX
Database:	MongoDB, MySQL, SQLite, Tableau, Pandas, NumPy, NoSQL
AI & ML:	Deep Learning, TensorFlow, Keras, PyTorch, Neural Networks, Scikit, XAI
Relevant Courses:	Database Management, Operating Systems, Web Application Development, Data Analytics, Artificial Intelligence, Cryptography and Network Security, Computer Vision, Internet of Things, Soft Computing

WORK EXPERIENCE

NeST Digital **Oct. 2023 - Oct. 2023**
Internship Trainee Kerala, India

- Wrote and debugged Python scripts for three development tasks focused on file handling and user input.
- Refactored code into modular components and enhanced clarity based on mentor and team feedback.

PROJECTS AND PUBLICATIONS

MALDROID – Android Malware Detection System **Sept. 2024-May 2025**
Technologies: Android, HTML, CSS, JavaScript, Python, TensorFlow, XAI

- Engineered a hybrid malware detection system integrating static and dynamic analysis, achieving 91.2% test accuracy across 5,000 APKs.
- Incorporated explainable AI via LIME to visualize code segments responsible for classification, enhancing user transparency and trust.
- Built an interactive web interface enabling seamless APK uploads and real-time classification; validated with 120 real-world samples in live demos.
- Presented at ACCTHPA 2025, showcasing lightweight interpretability techniques for Android security; currently under review for IEEE publication.

SPACEUP – Real-Time Parking Management System **Jan. 2024 - May 2024**
Technologies: MongoDB, Express, React, Node.js, HTML, CSS, JavaScript (MERN Stack)

- Built a MERN-based web application to manage 30+ campus parking slots, allowing users to log, update, and track parking availability in real time.
- Implemented role-based access (admin/user) and automated status polling to ensure up-to-date occupancy visibility.
- Added a carpooling module with driver lookup functionality, enabling users to discover nearby commuters and reduce traffic congestion.

SUPPLY MANAGEMENT – Queueing-Based Parcel Packing Optimizer **Jan. 2025 - May 2025**
Technologies: Python, Flask, HTML, CSS, JavaScript

- Simulated 4 queueing strategies for parcel packing using real-time data from CSV files.
- Output showed a 28–32% increase in throughput compared to the baseline FIFO model.
- The dashboard visualized queue lengths and idle time.
- Tested across various warehouse sizes (20 to 100 workers) with configurable input rates.

PHISHSLEUTH – Browser-Integrated Phishing Detection Tool (Self-Project) **July. 2025 - July 2025**
Technologies: Chrome Extension, FastAPI, XGBoost, Docker

- Built a real-time phishing detector using a Chrome extension with a FastAPI backend, powered by an XGBoost model trained on URL and DOM features.
- Deployed via Docker on Render, enabling live detection with in-page risk highlights for suspected phishing sites.

CERTIFICATIONS

- NPTEL Certifications: Python for Data Science, Cloud Computing, Computer Networks and Internet Protocol