# Ragul Balajii

Education

#### Coimbatore Institute Of Technology

2023 - 2028

Master of Science in Decision and Computing Sciences

Coimbatore, Tamil Nadu

# Summary

Detail-oriented and results-driven Software Developer with hands-on experience in full-stack development, AI/ML, and cybersecurity. Proficient in building secure, scalable applications using React, Python, and FastAPI. Skilled in blockchain, test automation, and solving complex real-world problems using modern technologies and clean code practices.

# Experience

SimTestLab May 2025 - Jun 2025

Web Developer Intern (Remote)

Sweden

- Completed a hands-on internship focused on full-stack development using **React.js**, **Next.js**, and **JavaScript** across 4 real-world web modules.
- Engineered a JSON Code Converter that transforms JSON into C, C++, Java, Python, and JavaScript, with a verified 95% conversion accuracy across 200+ test inputs.
- Optimized component lifecycle using React Hooks and Next.js routing, reducing load times by 30% and increasing scalability.
- Collaborated in a 4-member agile team using Git, Scrum standups, and Jira, improving delivery speed by 20%.
- Executed comprehensive UI testing and cross-browser debugging, ensuring 100% responsiveness across 10+ modern browsers/devices.

## **Projects**

#### SmartRx - AI Health Companion | React, FastAPI, NLP

June 2025

- Spearheaded the development of a secure, AI-based medication tracking app used by 150+ test users.
- Applied NLP models to parse and validate prescriptions, flagging drug interactions with 95% accuracy on 1,000+ inputs.
- Embedded geolocation APIs and QR record access, reducing emergency retrieval time by 60%.
- Crafted a modular dashboard using React Hooks, increasing user engagement by 40% in usability testing.

#### **TradeGuard** | Python, JavaScript, React, Node.js, Move

March 2025

- Architected a blockchain-based trading platform on Aptos with auto risk control, handling simulated volumes of 500+ transactions/day.
- Audited and validated Move smart contracts with 100+ test cases; achieved zero critical vulnerabilities, reinforcing wallet-level security.
- Designed and deployed a real-time dashboard using React and Node.js, visualizing live crypto data and predictions with sub-second latency.
- Deployed AI modules to automate trade execution, hedge volatility, and dynamically adjust leverage cutting user liquidation risk by 50%.

#### Technical Skills

Languages: C/C++, Java, Python, JavaScript, HTML/CSS, SQL, Bash Frameworks/Technologies: React, Node.js, Linux, Git, GitHub, REST API

Developer Tools: VS Code, Android Studio Operating Systems: Linux (Arch/Kali), Windows

## Extracurricular

Binary\*Forge Cybersecurity CTF - 2nd Place March 2025

PGS Tech

• Secured 2nd place out of 200+ teams in national CTF; solved 12+ high-difficulty challenges in cryptography, binary exploitation, and reverse engineering.

#### Algnite'25 AI Hackathon - 2nd Place

March 2025

Coimbatore Institute of Technology

• Developed an AI-powered React app to digitize and classify handwritten prescriptions; improved accuracy from 50% to 78% using iterative OCR model tuning.