# RAGHAVA N

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### **EDUCATION**

Integrated Masters in Artificial Intelligence & Machine Learning Coimbatore Institute of Technology, Coimbatore Expected Graduation, May 2026 CGPA 9.0/10 as of 7th sem

• Related Coursework: Mathematics and Statistics for ML, Data Structures and Algorithms, Computing in Python, Computer Networks, Operating Systems, Intelligent Agents in AI, Databases and Data Management, Cyber Security

### TECHNICAL SKILLS

Languages
Frameworks
Tools
Machine Learning Concepts
Cybersecurity Tools

Python, C, SQL, Mongo DB, Express, React JS, Node, HTML, CSS, JavaScript Scikit learn, TensorFlow, Torch, LangChain, CrewAI, Flask, Fast API, Rest API Git Version Control, Virtual Machines, Docker, Postman, Json Web Token Artificial Neural Networks, Deep Learning, Natural Language Processing, LLM Kali Linux, Wireshark, Burpsuite, Nmap, Nikto, Ghidra, PE Studio, John The Ripper

### **EXPERIENCE**

#### MALWARE ANALYST RESEARCH INTERNSHIP

Defence Institute of Advanced Technology

July 2024 - December 2024 Pune, Maharastra

- Researched the generation and analysis of polymorphic and metamorphic malware using Large Language Models (LLMs), configured a custom malware analysis lab using FlareVM and Remnux, and performed static and dynamic malware analysis on 50+ malware samples in a sandboxed environment, delivering comprehensive reports on findings.
- Utilized AI agents and LangChain to demonstrate the effectiveness of different prompt types (Direct and Adversarial) in generating malware with LLaMA 3.1 70B, achieving the highest success rates with adversarial prompts, generating 51 compiled and 35 executable code samples, showcasing advanced malware creation techniques.

# **PROJECTS**

#### AGENTIC PRODUCT SUPPORT

Source Code

- Built a multi-agent AI system for intelligent product support of household products, consisting of 2 crews, 3 tools, and 4 specialized agents in a coordinated workflow flow powered by advanced Agentic Retrieval Augmented Generation.
- Integrated FastAPI backend with React JS and Material UI, leveraging Google Gemini Flash 2.0 LLM with a 1 million token context window, enabling accurate, context-rich product support interactions for seamless user query resolution.

GENZ HIRING Source Code

- Engineered a AI-powered resume analysis tool using ChatGPT 3.5, LangChain, and Flask that generates personalized resume modifications. Accomplished a turnaround time of under 1 minute, significantly enhancing applicant efficiency.
- Automated job matching by leveraging SerpAPI and advanced web scraping to deliver tailored job recommendations. Attained a 50% reduction in job search time, making it an essential AI tool for students, professionals, and job seekers.

# INTRUSION DETECTION PREDICTION

Site Link

- Developed and deployed a cybersecurity solution using machine learning to predict cyber attacks based on network packet data, employing preprocessing (cleaning, sampling, scaling, visualization) to reduce data redundancy by 39%
- Applied Naive Bayes, Random Forest, and XGBoost models for classification, with hyperparameter tuning and cross-validation, achieving an average accuracy of 94% with the XGBoost model, outperforming other models.

EV-OLUTION Site Link

- Created a MERN full-stack e-commerce platform for electric vehicle accessories, achieving 50+ user signups on launch day through an intuitive UI/UX design and deployed on Render for seamless accessibility.
- Designed an intuitive admin panel and REST API with full CRUD functionality and live order tracking, streamlining administrative tasks by 75% and enabling real-time updates, with comprehensive API testing performed using Postman.
- Implemented secure JWT authentication and Stripe payment gateway, boosting payment success rates by 99%

## **CERTIFICATIONS**

• Red Teaming LLM applications, DeepLearning.AI

August 2024

• Ethical Hacking Essentials (EHE), EC Council

July 2024 April 2024

• Google Cybersecurity Professional Certification, Coursera

#### **ACHIEVEMENTS**

• Secured 2nd position in the HyperVerge AI Hackathon and received a cash prize of 15,000 INR

April 2025

• Reported a security vulnerability with (CVSS 8.1) in the Indian Space Research Organization (ISRO)

July 2024

• First place with a prize money of 25,000 INR in the Byte Sized Brainstorm Hackathon hosted by Cookr April 2024

• Achieved second place in Googleathon 2.0 organized by the Google Developers Student Club, SNS November 2023