# RAGHAVA N

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# **EDUCATION**

Integrated Masters in Artificial Intelligence & Machine Learning Coimbatore Institute of Technology, Coimbatore Expected Graduation, May 2026 CGPA 8.95/10 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

LanguagesPython, C, SQL, Mongo DB, Express, React JS, Node, HTML, CSS, JavaScript, JavaFrameworksScikit learn, TensorFlow, Torch, LangChain, CrewAI, Flask, Fast API, Rest APIToolsGit Version Control, Virtual Machines, Docker, Postman, Json Web TokenMachine Learning ConceptsArtificial Neural Networks, Deep Learning, Natural Language Processing, LLMCybersecurity ToolsKali Linux, Wireshark, Burpsuite, Nmap, Nikto, Ghidra, PE Studio, John The Ripper

#### **EXPERIENCE**

#### MALWARE ANALYST RESEARCH INTERNSHIP

Defence Institute of Advanced Technology

July 2024 - Decemeber 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, Indirect, 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**

PROTECTION ONLINE Source Code

- Built a Chrome extension with Generative AI and RAG to check regulatory compliance (DPDPA Act , IT Act 2000) and to summarize E-commerce privacy policies with regional language translation, reducing reading time by 93%.
- Introduced a four-layered security approach (SSL certification, Google Safe Browsing, crowd sourced data, obfuscated JavaScript), achieving 89% accuracy in detecting malicious sites through deep learning methods.

# INTRUSION DETECTION PREDICTION

Working

- 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.

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.

EV-OLUTION Working

- 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
- Ethical Hacking Essentials (EHE), EC Council
- Google Cybersecurity Professional Certification, Coursera

August 2024

 $\mathrm{July}\ 2024$ 

April 2024

# **ACHIEVEMENTS**

- First place in the Byte Sized Brainstrom Hackathon (The DoughVinci Code) hosted by Cookr
- April 2024
- Secured 15th position out of 870+ teams in the National-level Dark Patterns Hackathon at IIT Varanasi January 2024
- Achieved second place in Googleathon 2.0 organized by the Google Developers Student Club, SNS November 2023