VARUN M

Arcot, TamilNadu, India

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Technical Skills

Programming Languages & Databases: C, HTML/CSS, JavaScript, Python (Pandas, NumPy, Scikit-learn, Matplotlib, Seaborn, Plotly), SQL

Tools & Platforms: Git, Docker, VS Code, Linux (Ubuntu, conda), WSL, AWS

Libraries/Frameworks: TensorFlow, PyTorch, Keras, OpenCV, Hugging Face (Transformers), LangChain, Flutter, NLTK

Soft Skills: Critical thinking, adaptability, and Collaborative worker

Relevant Coursework

- Data Structures
- Algorithms
- Software Testing
- Data analysis
- Software Engineering
- Database Management
- Machine Learning
- Agile methodology

Experience

Mitacs Globalink Research Internship'24 — Jul. 2024 – Sep. 2024
Research Intern — *British Columbia, Canada*

- Analyzed 10+ research papers to identify gaps in malicious traffic detection and machine learning use in cybersecurity
- Built and optimized machine learning models (Logistic Regression, SVM, Random Forest) to classify network traffic, reaching 91% accuracy in detecting malicious activity
- Implemented a phishing detection system combining layout detection, logo comparison, and CRP classifier to improve phishing site identification accuracy
- Led the project using Python (Pandas, Scikit-learn, BeautifulSoup) for web scraping, data processing, and feature extraction, creating a scalable phishing detection framework

Indworks — Jul. 2023 – Jan. 2024
Software Development Intern — *Chennai, India*

- Developed mobile interfaces using Flutter at Indworks, increasing user engagement by 30% through improved client experiences and app functionality.
- Integrated Firebase for backend services, enhancing data synchronization by 40% and improving user authentication efficiency by 25%, boosting security and performance.

Education

Anna University - C. Abdul Hakeem College of Engineering & Technology — Sep. 2021 – May. 2025
Bachelor of Engineering in Computer Science - **CGPA : 9.14/10** — *Ranipet, India*

Projects

Outlyr.AI - Cold Email Generator | *Python, ChatGroq, LangChain, ChromaDB, Streamlit* — Nov. 2024

- Built a tool that extracts job listings from company careers pages and crafts highly personalized cold emails, reducing the time spent on outreach by 50% for HR teams.
- Implemented a vector database to dynamically source portfolio links, ensuring personalized emails aligned with job requirements.
- Configured the project with environment variables, including API key setup for Groq, ensuring seamless deployment and reducing setup time for new users by 40%.

Source code : Click here

GAN-Enhanced Phishing Detection | *Python - Numpy, Pandas, Scikit-Learn, PyTorch* — Sept. 2024

- Developed GRPD, a phishing detection framework leveraging adversarial training and multi-modal features to combat GAN-generated attacks, achieving 92% accuracy.
- Engineered a framework incorporating 15 features from URLs, HTML, and WHOIS data, reducing phishing response time to under 3 seconds.

Source code : Click here

Achievements & Research

- Mitacs-funded Summer Research Project, awarded 8800 CAD after competing with 30,000 applicants worldwide
- Fully funded scholarship for the entire 4-year undergraduate program, awarded by my high school in recognition of academic excellence.
- Varun Mayilvaganan, Dr. Sina Keshvadi, "GAN-Enhanced Phishing Detection: Improving Classifier Robustness with Synthetic Malicious Data", IEEE Canada, manuscript is drafted (expected submission in Feb. 2025)