Prabu Jayant

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Education

RV College of Engineering — **Bangalore, India**
B.E. in Computer Science Engineering (Cybersecurity), GPA: 8.65 — *Aug 2022 – May 2026*

Experience

Juniper Networks — **July 2024 - Feb 2025**
Research Intern - CASB Security Analytics — *Bangalore, India*

- Developed a hybrid transformer-based framework for encrypted SaaS traffic classification, achieving **97.90%** service classification accuracy and **98.98%** activity classification accuracy using deBERTa and CodeBERT models.
- Implemented zero-shot learning techniques for SaaS traffic analysis without decryption, enabling classification of previously unseen services with confidence thresholding at **0.85** precision.
- Designed a two-stage classification pipeline combining pre-trained language models with Random Forest, reducing false positives by **28%** compared to traditional methods through CodeBERT optimization.
- Built real-time traffic analysis capabilities using AnyProxy middleware, processing **10,000+ HTTPS transactions** daily with structured feature extraction from encrypted payloads.
- Developed multi-modal learning architecture integrating network statistics with semantic embeddings, improving detection of obfuscated traffic patterns by **40%**.
- Collaborated on privacy-preserving classification using generic activity labels, enabling security monitoring while maintaining compliance with data governance regulations.

SkySecure Ltd — **Nov 2023 – Dec 2023**
Research Intern - AI in Cybersecurity — *Bangalore, India*

- Designed and implemented distributed storage architecture for an **LSTM-based Network Intrusion Detection System**, managing **5,000+** network traffic samples with optimized data retrieval achieving **92.83%** accuracy.
- Developed efficient data storage schemas and indexing strategies, reducing query response times by **40%** for real-time threat detection workflows.

Technical Skills

Programming Languages: Python, C/C++, JavaScript
Storage & Systems: Distributed Systems, Data Structures, Algorithms
Containerization: Docker, Microservices Architecture
Web-end Development: React, Flask, MongoDB, Express.js, Node.js, RESTful APIs
AI/ML & Data Science: TensorFlow, Machine Learning

Projects

DefenSys - Integrated Deep Learning Platform | Docker, Python, Flask, TensorFlow, ResNet

- Developed a comprehensive cyber defense platform integrating malware detection with dynamic attack simulation, achieving **95%+ classification accuracy** across **25+ malware families**.
- Architected containerized network using **Docker** to simulate **3 IoT devices**, implementing Apache Benchmarking tools for secure DDoS testing and real-world cyberattack execution.
- Built deep learning models using **ResNet and CNNs** for binary-to-grayscale image conversion of malware samples, processing **9,000+ malware images** with hierarchical classification.
- Created Flask-based web services with real-time dashboard monitoring, implementing automated IP blacklisting and network-wide threat propagation across distributed IoT nodes.

Terra - AI-based Personalized Carbon Footprint Companion | Flask, Llama 3.2, Firebase, OCR

- Developed AI-powered mobile application integrating **RAG with Llama 3.2 3B Instruct model** and SearXNG for personalized carbon emission tracking across transport, food, and streaming categories.
- Implemented OCR-based eco-shopping assistant using **EasyOCR** and real-time web scraping from OpenFoodFacts database, achieving accurate product eco-score retrieval and sustainable alternatives.
- Built comprehensive carbon footprint calculator with **Firebase authentication** and Firestore database integration, enabling users to track emissions and engage in verified carbon offset projects.

Achievements

- **CODE RED'25 Hackathon** - 4th Place, INR 10,000 Prize (Top 1% out of 1000+ teams) - Built Guardian Mesh
- **ELCIA Next-Gen Tech Hackathon** - Top 10, INR 10,000 Prize - Built Healthcare IoT device