

BARATH SUNDARARAJ

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[GitHub](#) | [LinkedIN](#) | [Portfolio](#)

ABOUT ME

Master of Applied Computer Science graduate with hands-on experience in software development, backend systems, Linux, application troubleshooting, and security related technologies. Skilled in Python, FastAPI, and REST APIs, with practical knowledge of PKI, digital certificates, and OpenSSL. Experienced in developing machine learning applications using PyTorch, TensorFlow, and Scikit-learn. Strong problem-solving and automation skills, with a focus on building reliable solutions for real-world environments. Currently seeking opportunities in backend development, AI/ML, or security related roles.

EDUCATION

Concordia University <i>Master of Applied Computer Science</i>	Jan 2025 – Aug 2026
Sri Ramakrishna Institute of Technology <i>Bachelor of Engineering, Computer Science and Engineering</i>	Nov 2020 – May 2024

PROFESSIONAL EXPERIENCE

AppViewX Pvt Ltd <i>Software Engineer - Intern</i>	Jan 2024 – Jul 2024
• Troubleshoot and resolved complex customer issues involving AppViewX GUI, Cert+, and ADC+, diagnosing application, configuration, and system-level problems and resolving issues within 24 hours. • Developed and troubleshoot Linux-based applications and services using Python and Linux system tools to investigate failures and improve application reliability. • Worked with PKI, digital certificates, OpenSSL, and certificate lifecycle management, supporting certificate-related operations and troubleshooting across enterprise environments. • Investigated network and security-related issues, analyzing application and system behaviour to identify root causes and improve the reliability of certificate and network operations. • Developed Python automation scripts and internal Flask/REST API tools to streamline repetitive technical tasks, data processing, troubleshooting, and deployment workflows. • Collaborated with engineering, product, and design teams to investigate technical issues, communicate findings, support product development, and maintain technical documentation and test plans.	

PROJECTS

AI Powered Hybrid System for Malware Detection • Developed a real-time, multi-modal malware detection system that fuses static analysis (binary-to-image conversion) with dynamic behaviour analysis (process monitoring). • Implemented deep learning models (ResNet50, EfficientNet) to classify malware families from binary visualisations and a Random Forest classifier for behavioural process data. • Engineered a fusion layer to combine predictions from both modalities, significantly improving detection accuracy over single-model approaches. • Built an interactive Streamlit dashboard for real-time threat visualisation and a Watchdog system to automatically scan and flag new files in monitored directories.	
Voice Based Survey to Recognize Emotions • Conducted exploratory data analysis and feature extraction on audio recordings using Python libraries to prepare inputs for classification • Developed and tuned SVM-based sentiment classifiers in Python to recognize respondent emotions, achieving consistent accuracy across validation sets • Implemented a Python script for automated email notifications delivering sentiment analysis summaries to administrators • Authored user and technical documentation to guide survey setup, data handling procedures, and deployment steps	

SKILLS

- **Languages:** Python, Java, SQL
- **Backend & APIs:** Flask, FastAPI, REST APIs
- **Databases:** MySQL, PostgreSQL
- **Security & Systems:** Linux, PKI, Digital Certificates, OpenSSL, Certificate Lifecycle Management
- **Machine Learning:** Scikit-learn, TensorFlow, Keras, PyTorch

AWARDS AND HACKATHONS

- **ODSC & Google Cloud Virtual Hackathon:** Built an **Agentic AI application**, earning **3rd place** for technical execution and innovation.
- **IBM TechXchange 2025 watsonx Hackathon:** Recognized among the **Top 50 projects** for an AI solution developed as part of the pre-conference hackathon.