HIRULA ABESINGHA

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AI ML enthusiast with a strong interest in cyber security, neural networks, deep learning, and software development. Experienced in designing secure and scalable systems, conducting threat analysis and vulnerability assessments, and building data driven security solutions. Applies machine learning techniques to areas such as threat detection and risk analysis, supported by a solid software engineering foundation to develop reliable real world applications.

Skills

- Languages: Python, Java, JavaScript, C, C++, Bash, HTML, CSS
- ML/AI Frameworks: TensorFlow, PyTorch, scikit-learn, Keras, OpenCV, NLTK
- Data Science & Analysis: Pandas, NumPy, Matplotlib, Jupyter
- Frontend: React, Next.js, Tailwind CSS, Bootstrap
- Backend: Spring Boot, Node.js
- Databases: MySQL, MongoDB
- Cyber Security: Secure coding practices, authentication & authorization concepts, data protection principles, vulnerability awareness, API security fundamentals

Education

B.Sc. (Hons) in Information Technology 2024- Present
Sri Lanka Institute of Information Technology (SLIIT)

G.C.E. Advanced Level – Physical Science Stream 2022/24
Galahitiyawa Central College, Ganemulla

G.C.E. Ordinary Level 2020/21
OKI International School, Kandana

Core Competencies

- Artificial Intelligence & Machine Learning: Model training, evaluation, and optimization
- Deep Learning Architectures: CNNs, RNNs, Transformers, GANs
- Data Science & Analytics: Preprocessing, visualization, feature engineering
- Model Deployment: Integrating models into web applications & APIs
- Frontend Development: Responsive, interactive UI/UX design

Projects & Experience

Diabetic Retinopathy Detection

- *Built preprocessing pipelines for medical images.*
- *Experimented with CNN architectures for classification.*
- *Applied data augmentation and optimization techniques for accuracy improvements.*

AI-Driven Zero-Trust Behavior Firewall (ZTBF) - dev

- *Developed an AI driven zero trust behavior firewall to continuously monitor and control access across users, services, APIs, and cloud workloads.*
- *Implemented behavior based threat detection using machine learning techniques to identify anomalies such as credential theft, insider threats, and lateral movement.*
- *Built real time risk evaluation and enforcement mechanisms enabling alerts, adaptive authentication, and access isolation.*

Statica

- *Designed and implemented a domain-specific programming language for statistical analysis and reporting.*
- *Integrated statistical modeling, hypothesis testing, and visualization using Pandas, SciPy, and StatsModels.*
- *Focused on human-readable result interpretation to make statistical insights more transparent and accessible.*

Currently Learning

- Advanced Deep Learning (Transformers, Diffusion Models, GANs)
- Computer Vision (object detection, image segmentation)
- Natural Language Processing (text classification, embeddings, LLMs)
- Cloud & MLOps (AWS, Azure, Docker, CI/CD pipelines)
- Advanced UI/UX design for intelligent systems