ISAAC NATARAJAN

Aspiring Cybersecurity Professional | AI & ML Graduate | CEH and APT (Ongoing)

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ABOUT ME

Recent Computer Science graduate specializing in Artificial Intelligence and Machine Learning, with a growing passion for cybersecurity. Currently pursuing APT and CEH certifications at RedTeam Hacker Academy to gain hands-on expertise in penetration testing and ethical hacking. Eager to apply AI/ML techniques in cybersecurity to build intelligent defense systems and contribute to securing digital infrastructures.

EDUCATION

Sathyabama University , Chennai, Tamilnadu **Jul 2021 - May 2025**

B.E. Computer Science with Artificial Intelligence & Machine Learning

Secured CGPA 8.23/10

INTERNSHIP

Prodigy Infotech | Chennai, Tamilnadu **Jan 2024 - Feb 2024**

Machine Learning Intern

- Participated in a project dealing with Dogs vs. Cats classification and gained practical experience with deep learning through Convolutional Neural Networks (CNN) processes.
- Carried out image pre-processing tasks such as image resizing, pixel normalization, and dataset partitioning into train and test portions.
- Achievements were analyzed in terms of accuracy and loss as performance metrics.
- Increased the image classification quality by burning the hyperparameters values and the aim of the model architecture building.

ExcelR Solutions | Chennai, Tamilnadu **Jul 2023 - Oct 2023**

Data Science Intern

- The data was uniformed for accuracy so that raw data would be less prone to errors and more informative and useful.
- The data was made consistent by using outliers, and this ensured appropriate standardization for valid analysis.
- Machine learning techniques were used appropriately to predict liver disease with the model being tuned for the dataset and the constraints of the problem.

PROJECTS

Phishing Website Detection using Machine Learning **Jul 2025**

- Developed a Random Forest-based phishing detection system achieving 97% accuracy on UCI dataset with 11,055 samples, demonstrating strong machine learning implementation and cybersecurity threat analysis skills.
- Implemented comprehensive model evaluation including confusion matrix visualization, feature importance analysis, and classification metrics to validate model performance and interpretability.

Technologies Used : Scikit-learn, Pandas, Numpy, Matplotlib, seaborn

Enhanced Spatial Awareness through Smart AI Glasses **Jun 2024**

- Developed a real-time wearable navigation system for visually impaired users using embedded camera in spectacle frame to capture environmental data and provide audio-based guidance for enhanced mobility and safety.
- Engineered computer vision pipeline with OpenCV and TensorFlow algorithms for object detection, obstacle recognition, and feature identification, converting visual information into comprehensive audio feedback through TTS integration.
- Optimized embedded system performance on Raspberry Pi hardware to handle real-time processing constraints, varying lighting conditions, and computational limitations while maintaining responsive user experience.

Technologies Used: Python, OpenCV, TensorFlow, Raspberry Pi, TTS (Text-to-Speech) APIs

College Bus Monitoring Using ANPR **Jan 2024 - Apr 2024**

- Designed automated vehicle tracking system using ANPR technology to monitor college bus entry/exit times through CCTV surveillance cameras at strategic access points, enabling real-time fleet management.
- Implemented robust image processing pipeline with OpenCV and Tesseract OCR to capture, preprocess, and extract license plate text under varying lighting and weather conditions with high accuracy performance.
- Integrated comprehensive data management solution with MySQL database for automated logging, report generation, and historical data analysis of vehicle movements and operational patterns.

Technologies Used: Python, OpenCV, Tesseract OCR, Machine Learning

CERTIFICATES

- Intermediate Machine Learning - Kaggle
- Oracle Cloud Infrastructure - Oracle
- Artificial Intelligence - AICTE
- Linux 100:Fundamentals - TCM Security

SKILLS

- AI & ML Tools - Tensorflow, Computer Vision, Keras, Scikit-learn, Pandas, Numpy, matplotlib, Seaborn, YOLO, PyTorch (Basic).
- Scripting and Languages - Python, Bash, Powershell, SQL.
- Offensive security - VAPT (Web, system, network, cloud).
- Tools & Technologies - Nmap, BurpSuite, Metasploit, Nessus, Wireshark, Hydra, John the Ripper, Mimikatz, BloodHound, Sqlmap, Smb, Kali Linux.
- Soft skills - Communication, Adaptability, Problem-Solving.

ADDITIONAL INFORMATION

- Languages - English, Tamil, Malayalam