Vishnu Teja Kandalam

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Education

George Mason University	Fairfax, VA, USA
Master of Science in Computer Science, C.G.P.A: 3.95/4.0	Aug. 2023 – May 2025

Coursework: Computer Networks, Operating Systems, Data Mining, Analysis of Algorithms & Deep Learning

Andhra University	Visakhapatnam, India
Bachelor of Technology in Computer Science, C.G.P.A: 7.89/10	Jul. 2016 – Apr. 2020

Course Project: *Botnet detection using Artificial Neural Networks*

Research

Real Time Intrusion Detection Using Deep learning	Dr. Xinyuan Wang
Master's Thesis	Mar. 2024 - Present

- Conducted an analysis of network packet captures using wireshark to identify real time indicators of malicious communication.
- Implemented a pre-processing script to aggregate real-time features from network traffic.
- Working on development of a deep learning methedology for detection of cobalt strike communications using Python Keras framework.

EM Side-channel attacks on Smartphones	Dr. Xiaokuan Zhang
Research Assistant	Apr. 2024 - Present

- Collaborating on a project exploring electromagnetic side channel analysis across devices such as mobile phones and tablets.
- Built an end-to-end test-bed for investigation of EM side channel attacks on mobile phones

External Reviewer:

- The Network and Distributed System Security 2025 (NDSS)
- ACM Conference on Computer and Communications Security 2024 (CCS)
- Annual Computer Security Applications Conference 2024 (ACSC)

Projects

Clustering Songs by genre | *Python, Pytorch, ConvNets*	Sept. 2023 – Dec. 2023

- Worked on building a Convolutional model for clustering songs based on their genere.
- Trained a ConvNet for classification and then extended the architecutre to produce text embeddings that can be used to cluster different songs from unseen generes.
- Attained an accuracy of 71.75% when trained with lyric embeddings of the songs.

Botnet traffic detection using Artificial Neural Networks | *Python, Keras, ANN*	Jan. 2020 – Apr. 2020

- Wrote a pre-processor module in python to extract flow charectorstics from PCAP traces into a CSV.
- Processed the datasets gathered from Canadian Institute of Cyber-security and trained an artificual neural network for the classification of Botnet Flows.
- Worked with Python Keras framework for building the neural network that produced an accuracy of 72%.

Experience

Graduate Teaching Assistant   Aug. 2024 – Present
Department of Computer Science, George Mason University   Fairfax, VA, USA
- **Course:** Database Management systems (CS550)

Data Scientist   Jun. 2020 – Jun. 2023
Yxiom Technologies   Hyderabad, India
- Developed and deployed machine learning models for sports analytics applications, providing insights for data-driven decision-making.
- Worked on development of a real time fully-automated trading system that yielded several profitable trades.
- Contributed to the development of front-end visualization dashboards displaying sensor data.

Intern   Jun. 2019 – Aug. 2019
Wealien Creations Private Limited   Visakhapatnam, India
- Developed an automated garden system for monitoring sunlight, humidity, and autonomously watering plants.
- Utilized Arduino connected with multiple sensors for collection and visualisation of data.
- Developed a client-server architecture for real-time data reporting across multiple clients which is suited for large gardens.

Teaching Volunteer   Jul. 2022 – Present
Evidyaloka N.G.O.   Bangalore, India
- Teach weekly online Math lessons to 7th grade students in rural India.

Technical Skills

Experience: Client-server architecture development, System design and API integration, Data Visualization
Programming Languages: Python, Java, C, Bash, Go
Frameworks: React, Flask, Vue.JS
Technologies: Android app development, Arduino, Web development
Certifications (Coursera): Deep learning specialisation, Software security, Divide and Conquer Algorithms
Developer Tools: Git, Docker

References

Dr. Xinyuan Wang, Associate Professor
George Mason University
xwangc@gmu.edu

Dr. Xiaokuan Zhang, Assistant Professor
George Mason University
xiaokuan@gmu.edu