KARTHIKEYAN SURESH

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Education

Erasmus Mundus Joint Masters Degree in GENIAL Sep. 2022 – Present
Masters in Green Networking & Cloud Computing *FR, UK, SE*

Kyushu University Oct. 2018 – Sep. 2022
Bachelor of Electrical Engineering & Computer Science; CGPA: 3.77/4.00 *Fukuoka, JP*

Experience

Summer Internship & IT Support Specialist Jul. 2023 – Aug. 2023
NBTC Group *Al-Ahmadi, KW*

- Observed in detail the working of the company and how the IT-related issues were managed
- Gained a comprehensive understanding of the company's IT network and systems, including the AWS cloud infrastructure and data center installations
- Assisted with various tasks such as troubleshooting, formatting, and fixing PCs and conducted backups of old PCs and performed fresh operating system (OS) and software installations

Undergraduate Research Assistant Apr. 2020 – Aug. 2022
AI & Human Interaction Lab, Kyushu University *Fukuoka, JP*

- Proposed motif discovery in Temporal Convolutional Networks (TCNN) for improved classification
- Used matrix profile to extract discords from periodic datasets and extracted patterns from them
- Combined matrix profile and original features, along with attention mechanisms, resulting in an average 6% improvement across UCR Time Series datasets
- Co-authored a paper in the **ACPR 2024 Conference Manuscript.** Second paper in the works.

Projects

AHP-based Decision-Making System | *Python, Arduino, JavaScript* Dec 2022 – Jan 2023

- Collaborated with colleagues at ULorraine and developed a room selection system based on user preferences and eight criteria for comfort.
- Displayed interactive 2D map real-time data, allowing users to select and view information. Utilized Analytic Hierarchy Process (AHP) values to sort and present data to users.
- Implemented sensor data collection using MQTT brokers and Arduino sensors.

Green Website Development | *JavaScript, Python, Git* Nov. 2022

- Collaborated with colleagues at ULorraine to develop a green website for the Design4Green hackathon, featuring an interactive map showcasing fictional educational services categorized by various factors.

Matrix Profile-based Features for Signal Classification | *Python* Apr. 2021 – Aug. 2022

- Incorporated motif discovery and matrix profile to enhance Temporal Convolutional Networks for improved classification.
- Achieved an average 6% improvement across various datasets through experiments combining matrix profile, original features, and attention mechanisms.

Certifications

AWS Certified Cloud Practitioner: Amazon Web Services, Sep. 2023

Technical Skills

Languages: Python, C++, JavaScript
Developer Tools: Git, Docker, Amazon Web Services, VS Code, PyCharm, Unity
Libraries: Stumpy, Tensorflow, ahpy, pandas, NumPy, OpenCV, ROS, Seaborn

Language Skills

Native Level: English, Tamil
Limited Working Level: Japanese