Sanda Thura

https://www.linkedin.com/in/sandathura sandathura2001@gmail.com Personal Website: sanda.thura.me

Education

Bachelor of Science in **Computer Science,** *Manga Cum Laude* Cumulative GPA: **3.828 / 4.0**
Minor: **Honors Interdisciplinary Studies**
James Madison University, Harrisonburg, VA Graduation: Spring 2023
President's List: Spring 2021, Fall 2021, Spring 2022, Dean's List: Fall 2019, 2020, Spring 2020, 2022, 2023
Honors Thesis: *Analysis of the Machine Learning Classification of Cardiac Disease on Embedded Systems*

- Analyze the performance of machine learning model on embedded systems to diagnose cardiovascular diseases.
- It is feasible to implement ML models on low-cost embedded system to assist people in developing countries.
- It is crucial to consider the noise from embedded system when training model for more accurate answer during inference.
- Published in IEEE Xplore: Sanda Thura, Jason Forsyth, Kevin Molloy, Jacob Couch, "Analysis of the Machine Learning Classification of Cardiac Disease on Embedded Systems" 2023 Systems and Information Engineering Design Symposium (SIEDS), Charlottesville, VA, USA, 2023 (published as full paper, reviewed as abstract). Link

Professional Experience

Full Stack Software Developer and Automation Engineer | Merck & Co. (July 2022 – Present)

- Developed **full-stack** data analytic dashboards using **R, SQL, Python, HTML, CSS, JavaScript, AWS, and rconnect.** Created a robust backend API server, database, automated data processing programs and a dynamic and responsive frontend web application.
- **Developed and fine-tuned** a natural language model to curate answers for operators by using data from documentation libraries and databases to improve productivity and problem-solving capabilities
- **Sampled** and **preprocessed** data from automation system to use in predictive and regression model training.
- Collaborated in an **agile team environment**, successfully delivering 5 high-impact projects on time and within budget through **sprint-style** development phases.
- Scoped and planned project requirements with stakeholders, demonstrating strong **project management** skills.
- Innovated a prototype that increased system performance by **60%** and reduced new application development time by **40%**.
- Verified, developed, and upgraded **DeltaV** automation systems, including their graphics and functions.
- Updated controlled documents with new system design specifications and Standard Operating Procedures (SOPs).
- Conducted stress tests and quality assurance to maintain a **99.5**% system uptime.
- Developed dashboards applications that **increased** client productivity by **30%** and **decreased** manufacturing downtime by **70%**, boosting company revenue by reducing waste and downtime.

Lead Teaching Assistant | James Madison University (Computer Science) (January 2021 – May 2023)

- Hold office hours and questions for over **30** students every office hours, assisting them with their labs and projects.
- Assist the instructor in class to maximize learning, grade the assignments, provide feedback to students.

Academic Experience and Related Course Work

Research Assistant | James Madison University (May 2022 – July 2022)

- Assisted Dr. Kevin Molloy in the field of computational biology with focus to sars-cov2 virus.
- Created the visualization and feature collection library using python and ML frameworks to extract features for a ML model.

Design for Internet of Things: a wearable pedometer (Step-counter)

- Build the embedded system for pedometer using Atmel 32u4, accelerometer and radio using C++, Audrino.
- Develop the dynamic time series based algorithm for detecting and automatically calculating steps without user intervention.

Skills and Activities

- Programming languages: backend: Java, C, C++, C#, R, python, database: SQL, frontend: R, HTML, CSS, JS, ML/AI: R, Python
- Languages: English(Fluent), Burmese(Native), Chinese(Intermediate)
- Honor Society : Upsilon Pi Epsilon (Computing and Information Disciplines), The National Society of Leadership and Success.

Service and Outreach

Leader for International Orientation Program | James Madison University (January 2022 -May 2023)

- Serve as an orientation leader to first-year, exchange, and transfer international students.
- Oversee the new needs and create solutions for the globally minded environment.
- Advocate and maintain supportive environment for the globally minded community

Computer Science Ambassador | James Madison University (January 2022 – August 2022)

- Assisted with prospective student communication through the creation of resources, social media, fielding questions, and being available for tours, video chats, and ad-hoc conversations.
- Ran CS workshops and coordinated volunteers to represent the department at events and campus tours.