Kaung Myat Kyaw

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ABOUT ME

I'm Kaung Myat Kyaw, a student who enjoys facing new challenges and solving problems. I'm always willing to adapt and learn new technologies through both theoretical and practical approaches. My goal is to become a researcher to contribute to our society

EDUCATION

King Mongkut's University of Technology Thonburi, Bangkok, Thailand

3nd Year - Undergraduate, GPAX - 3.87/4

TOEFL iBT

Total Score: 101/120

WORK EXPERIENCE

Automation Test Engineer Intern - Brillar, Yangon *(Mar 2022 - July 2022)*

- Automated software testing for MAS Singapore using Tosca
- Reported Defects to the development teams after analyzing the test results.

Summer Research Intern - Innovative Cognitive Computing (IC2), School of Information Technology, KMUTT *(Jun 2023 - Jul 2023)*

- Conducted experiments with Neural Radiance Field (NeRF), Structure-from-motion (SFM), and Multi-view-stereo for Image to 3D Reconstruction
- Hosted the workshop for high school students at Deep Learning and Artificial Intelligence Summer/Winter School (DLAI7)
- Built an automated program that can analyze and fetch the desired information from 800 research papers within 36 hours, using GPT 3.5 Turbo with LangChain.

Summer Research Intern - Innovative Cognitive Computing (IC2), School of Information Technology, KMUTT *(Jun 2024 - Jul 2024)*

- Built a backtesting simulator for quantitative traders
- Designed a framework and integrated a pipeline for generating synthetic multi-speakers conversation audios
- Built a hand gesture controlled car using Raspberry Pi

PROJECT EXPERIENCE

ConversaSynth

A framework to help researchers to generate synthetic multi-speakers conversation audios. Users can define the number of people involved in the conversation, the characteristics of each speaker, the topic of the conversation and the background noises. This project utilizes large language models and text-to-speech models.

Quizeo

A Flutter application that automatically generates multiple-choice quizzes for the youtube videos. Users only need to copy/paste the link to the desired youtube video in the application and within a few seconds, the application generates the multiple-choice quizzes together with the solution for the users. This aims to help students/learners to assess their knowledge after watching the educational youtube videos.

- Used YouTubeTranscript API to fetch the transcript of the youtube video
- Integrated Llama2 7B through Ollama to generate the quiz
- Deployed on the our own server using Flask

Climate Change Awareness Robot

This is a robot that moves around and spreads climate change awareness. Upon detecting a person via the camera, the robot will initiate the conversation about climate change which is powered by GPT 4 , Google TTS and Google STT models.

- Applied efficientdet_lite0 model from MediaPipe to classify humans and hand gestures
- Measured the approximate distances of a person from camera location by measuring the size of the bounding box
- Implemented the program on the Raspberry Pi 4 with 4GB RAM

Nominated as IEEE Thailand Section Representative to participate in IEEE Asia Pacific Region 10 Robotics event. The project document paper was accepted at ‘the 15th International Conference on Information Technology and Electrical Engineering’.

Storage Management using Computer Vision

A portable embedded system, which can be attached to the door of the refrigerator. Before storing inside the fridge, users can scan the items via the camera mounted on the system. The system will classify the item and it calculates the approximated expired date of the item, based on the predefined database. The list of items scanned are displayed on the screen of the system and sorted based on how far the current date from the expired date. The goal is to reduce the issue of having spoiled items inside the refrigerator which can impact hygiene and health.

- Created mini convolutional neural network with the architecture inspired from VGG Net
- Trained on self collected data (Milk bottle, Water bottle, Fruits, etc)

Won the first prize for Asia-Pacific Telecommunity Young Professionals and Students Innovative Project Challenge 2020

Automated Research Paper Analyzer

The aim of this project is to automatically download the computer vision related research papers from online websites and analyze which datasets were being used in those papers. This was to conduct research about the popularity of datasets among the computer vision researchers.

- Used Selenium to create a bot to download research papers from the Scopus.com listing.
- We applied a filter to the listing to make sure that the papers were related to computer vision only.
- Used LangChain to create a pipeline that utilized GPT3.5 Turbo to analyze the downloaded papers and fetch the dataset information from the papers. Afterwards, it stored the name of the datasets together with the title of the paper in the csv file.
- The program was able to analyze ~800 papers within 36 hours.

The Polytope Permutation Puzzle

It is a Kaggle competition where we have to solve three types of puzzle with the different sizes for each. The puzzles are Rubik Cube, Wreath (Hungarian Ring), Globe (Masterball). The leaderboard is sorted, based on the total minimum number of moves required to solve all of the puzzles.

- Applied Iterative Deepening A Star (IDA*) algorithm with heuristic function
- Solving the Factorization Problem in Permutation Groups using Minkwitz

Top 5% of 1054 teams and received the silver medal in competition.

Brain Activity Classification

The project idea is to classify the brain activities such as seizure, generalized periodic discharges, lateralized periodic discharges from the EEG and Spectrogram data. This project is currently in progress.

- Using EfficientNetB0 as a base model
- Adding dropout layers and applying regularizations to the base model to handle overfitting
- Experimenting data augmentations to the Spectrogram images to make the model robust

Academic Data Management System

Academic data management system is the system that helps the university admission department to manage and maintain the student data. Users can add/ delete/ edit courses as well as students to those courses. They can also set the grades for the students per course. It is an individual project as a part of CSC218 Database class at SIT, KMUTT.

- Used SQL, React JS, and Express JS

AWARDS

- First runner-up award at ASEAN Data Science Explorers National Final 2024
- Academic Excellence Award, School of Information Technology, KMUTT 2024
- Academic Excellence Award, School of Information Technology, KMUTT 2023
- Silver medal for being in the top 5% in The Polytope Permutation Puzzle 2023
- First prize for Asia-Pacific Telecommunity Young Professionals and Students Innovative Project Challenge 2020
- First runner-up award for AWS Build on Myanmar 2020 HackAThon
- Bronze award for Maker-Idea-Thon 2020
- Champion award for Myanmar STEM Competition 2019 (LegoMindstorms ev3 competition)
- Best Robot Design award for Myanmar STEM Competition 2019 (LegoMindstorms ev3 competition)

CERTIFICATES

- Nvidia DLI Certificate for the completion of Fundamentals of Deep Learning
- Automation Specialist Level 2 - Tricentis
- Automation Specialist Level 1 - Tricentis
- Certificate of Participation for IEEE R10 Robotic Competition 2023
- Certificate of Participation for Asia-Pacific Telecommunity Young Professionals and Students Innovative Project Challenge 2020
- Certificate of Participation for Maker-Idea-Thon 2020
- Certificate of Participation for Myanmar STEM Competition 2019
- Certificate of Participation for World Robot Olympiad National Event 2019
- Certificate of Completion for Make-A-Thon 2019
- Certification of Information Technology Professional (Issued by ITPEC)
- Certificate of Participation for Myanmar STEM Competition 2018

AREA OF INTEREST

- Object detection and classification
- Object Segmentation
- Graph Theories
- Language Models
- Machine Learning and Artificial Intelligence in Robotics