Tan Yee Fan

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Research Interest

My research interests lie in applying AI in healthcare and medical imaging to improve clinical decision support systems. Also, I am interested in the general application of Deep Learning, Machine Learning and Computer Vision. I am looking for any possible PhD opportunity which lie in my research interests in Spring/Fall 2022.

Education

Multimedia University — Melaka, Malaysia
Bachelor of Computer Science (Hons) Artificial Intelligence — *November 2019 – December 2021*
CGPA: 3.97

Multimedia University — Melaka, Malaysia
Diploma in Information Technology — *July 2017 – October 2019*
CGPA: 4.0

Experience

Undergraduate Research Assistant — February – August 2021
Multimedia University — *Melaka, MY*

- Conducted a research on predictive modelling for Digital Signage Advertising
- Investigated different models for time-series forecasting, including Statistical, AI, and Hybrid model
- Prepared a review paper with more than eighty research articles included, which introduced seven different models for dynamic pricing, proposing a framework for optimal model selection based on the data characteristics analysis

Research Assistant — October – November 2020
Multimedia University — *Melaka, MY*

- Worked as a team under supervision of a faculty lecturer
- In charge of data collection for analysis, web crawling and scraping techniques were applied to collect useful data for experimental study
- Designed the experiments which applied a rule-based system for DOOH dynamic pricing, by considering the importance of each independent variable using Machine Learning models

Peer Tutor — November 2018 – March 2019
Multimedia University — *Melaka, MY*

- Held the tutor position for the subject of Mathematical Technique
- In charge of preparing relevant materials and questions to conduct the tutorial section for the subject

Projects

Automatic Handwritten Text Recognition for Medical Application | *Deep Learning* — June 2020 – September 2021

- Final Year Project, grade received: pending
- Data collection: A different set of receipt templates were distributed to the public in acquiring different handwritten styles, obtained a sample size of 500
- Applied various data pre-processing methods before training, including skew correction, line removal, line segmentation, data augmentation, and others
- Models trained including: printed/handwritten text identification, OCR and HCR models, and information classification model
- Involved models: YOLOv5, Transformer, CNN, ResNet, LSTM, RNN, Bi-LSTM/RNN, NER
- Obtained an WER and CER of 9.29 and 6.12

Explainable Health Prediction with Transfer Learning | *Deep Learning* — June – November 2020

- A project aims to distinguish between healthy and sick faces, and obtaining explanation from black-box models
- Various experiments were investigated to tackle the problems of insufficient dataset, including data augmentation, GAN, and Transfer Learning
- A VGGFace structure is trained, by applying transfer learning, achieved an accuracy of 0.97 in classifying the images
- Applied various Explainable AI (XAI) techniques: LIME, XAI, IG to get model's explanation in making a decision, each techniques provides a reasonable explanation in highlighting the corresponding regions

AWS Hackathon Build On Malaysia (Finalist Top 50) | *Python, Git, AWS* — June – September 2020

- A hackathon held by Amazon Web Servies

- Worked in a team to build a smart cane prototype for visually impaired group by integrating various AWS services, considering the safety and practicality from different aspects
- Applied AWS services for tasks such as Object Recognition, Voice Recognition, Emergency Message, and others

Funtastic Event - Web-based Application | *HTML/CSS, JS, PHP, MySQL* April – November 2019

- Final Year Project of diploma, a full stack web-based application to enable users to hold an event through the platform
- Grade received: A

Manuscript

Explainable Health Prediction based on Facial Features using Transfer Learning (Under Review) 2021

Technical Skills

Languages: Python, C/C++, Java, HTML/CSS, JavaScript, PHP, Laravel, MySQL, CLIPS, LISP, Prolog
Developer Tools: Git, VS Code, Google Cloud Platform, Amazon Web Services
Operating System: Mac, Window
Office and Multimedia Tools: Microsoft Office, Adobe Illustrator, Adobe Premiere Pro
Linguistic: English, Mandarin, Bahasa Malaysia

Award / Certification

Dean List Award: Received for 8 semesters in Multimedia University
Best Diploma Student in Information Technology: Received full scholarship for Bachelor Degree Studies
Huawei Certification: HCIA-AI
Data Science 360: A certification program from LEAD

Volunteer Experience / Leadership

Orientation Series, CLS | *Assistant Director, Creative and Design Division* January – September 2019

- In charge of multimedia designs for publicity in MMU, promoting the event held
- Designed the member card of Chinese Language Society for year 2019, with more than 1000 members registered

Chinese Language Society | *Director, Activity of Recreational Division* January – November 2018

- Led a group comprised of approximately 30 people to hold an event in the campus to create an opportunity for university students in getting know each other
- In charge of tasks distribution and roles assignment for getting works done with a higher efficiency