Panayu Keelawat

https://gpanayu.github.io

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Seattle, WA

INTERESTS *Human-Computer Interaction, Interaction Design, CSCW, Artificial Intelligence*

EDUCATION

University of California San Diego, USA   2020 - 2022
Master of Science, Computer Science

Chulalongkorn University, Thailand   2015 - 2019
Bachelor of Engineering (First Class Honors), Computer Engineering

TECHNICAL SKILLS

JavaScript, ReactJS, Python, NodeJS, Java, C/C++, Prolog, PHP, SQL, Git, Flask, TensorFlow, Keras, Conda, Docker

WORK EXPERIENCE

Software Development Engineer   **Aug 2022 - Present**
Alexa Comms Calling Experience — Amazon — USA

Student Researcher   **Jul 2021 - Jun 2022**
The Design Lab — UC San Diego — USA
- Worked in a HCI lab with Prof. Haijun Xia as my supervisor
- Led a project on investigating relations between language and data operations to build a foundation for language-driven data manipulation
- Collaborated with my advisor and two other students to prototype and design a remote meeting software that extracts implicit and explicit intents to improve the meeting experience

Graduate Software Engineer   **Jun 2019 - May 2020**
Refinitiv — Thomson Reuters — Thailand
- Ported the majority of the inter-bank foreign exchange deal tracker web services from C# to NodeJS for server compatibility
- Updated the GUI and Java backend to support new deal types from FX Trading that feeds in transaction volumes of $425bn+ on average per day
- Re-architected transaction filter and sorting functions in the frontend for maintainability and scalability

Research Intern   **May 2018 - Jul 2018**
Numao Laboratory — Osaka University — Japan
- Worked in an AI research lab with the goal to enhance music listening experience by emotion recognition based on brainwaves
- Led the experiment of improving emotion recognition accuracy with various machine learning models using Keras, MATLAB, PyTorch, Python, and Conda
- Achieved good test results and was able to publish one conference paper and one journal paper

PUBLICATIONS

NBGuru: Extracting Information from Computational Notebook to Facilitate Asynchronous Communication in an Interdisciplinary Data Science Team
Panayu Keelawat
CHI LBW 2023 (Under Review)

Towards understanding text-data connection in documents through the lens of data operations
Panayu Keelawat
UC San Diego Master's Thesis

A Comparative Study of Window Size and Channel Arrangement on EEG-Emotion Recognition Using Deep CNN
Panayu Keelawat, Nattapong Thammasan, Masayuki Numao, Boonserm Kijsirikul
Sensors 2021

Subject-Independent Emotion Recognition During Music Listening Based on EEG Using Deep Convolutional Neural Networks
Panayu Keelawat, *Nattapong Thammasan, Boonserm Kijsirikul, Masayuki Numao*
CSPA 2019

SELECTED PROJECTS

Vision-based Crowd Density Reporting System
- Constructed a Flask server and deployed it to an AWS EC2 instance to handle image inputs, send images to the AI module, and push the outputs to display on the mobile application
- Implemented the data manipulation portion of the React Native mobile application which acts as an interface for crowd density reports
- Created a Python script that was deployed on a Raspberry Pi 3 Model B in order to take photos and send them to our server for computation
- Won the 1st runner-up prize in the National Software Contest 2019 (IoT track) in Thailand together with two other team members

E-Commerce Customer Clustering
- A part of UCSD ECE 225A Probability & Statistics for Data Science.
- Constructed customer clusters using k-means clustering and RFM analysis based on silhouette score.
- Analyzed customer behaviors from obtained clusters.
- Submitted a write-up [Link]

Cloud Speech-to-Text Service Benchmarking for Companies in Thailand
- A part of CU 2110498 Cloud Computing Technologies.
- Compared English speech-to-text services among Amazon Transcribe, Microsoft Azure Cognitive Service and Google Cloud Speech API.
- Analyzed and reported results with respect to metrics, such as accuracy, execution time and pricing.
- Published a blog (in Thai) [Link]

AWARDS AND HONORS

Best Presenter
CSPA 2019, Penang, Malaysia
Presented my research work on EEG-based emotion recognition during music listening at an international IEEE conference.

1st runner-up, IoT track, National Software Contest 2019
National Electronics and Computer Technology Center (NECTEC), Bangkok, Thailand
Integrated ML and sensor data to construct Vision-based Crowd Density Reporting System. Utilized CSRNet to perform the evaluation, and reported results via mobile application built with React Native.

1st runner-up, CU Toyota Ha:mo Open Innovation Contest 2019
Toyota Motor Thailand and Chulalongkorn University, Bangkok, Thailand
Created a PoC along with a development plan for ad-hoc network communication to promote safety and ECO driving as a part of electric vehicle. This contest was a collaborative project between Toyota and Chulalongkorn University.

2nd runner-up, AIROBIC 2018
Artificial Intelligence Association Of Thailand (AIAT), Bangkok, Thailand
Joined a hackathon held by AIAT. Created a sentiment-aware chatbot for personalized banking transactions using DialogFlow, Keras, Flask and ReactJS.

CU Savings Coop Scholarship, 2016 - 2019
Chulalongkorn University Savings Cooperative Ltd., Bangkok, Thailand
Received scholarship according to outstanding academic performance in every year.

CERTIFICATION

Deep Learning Specialization
By deeplearning.ai on Coursera [Certificate]