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INTERESTS	<i>Human-Computer Interaction, Computer Vision and Machine Learning</i>	
EDUCATION	University of California, San Diego, USA	2020 - Present
	<i>Master of Science, Computer Science</i> Expected Graduation in 2022	
	Chulalongkorn University, Thailand	2015 - 2019
	<i>Bachelor of Engineering, Computer Engineering</i> <i>First Class Honors (Rank: 5/115)</i>	GPAX: 3.90/4.00
TECHNICAL SKILLS	C/C++, Python, Java, Prolog, PHP, JavaScript, HTML, CSS, SQL, NodeJS, Git, Flask, TensorFlow, Keras, Conda, Docker	
WORK EXPERIENCE	Software Engineer (Graduate)	Jun 2019 - May 2020
	<i>Refinitiv — Thomson Reuters — Thailand</i> <ul style="list-style-type: none"> Developed readable and maintainable code for a global-scale inter-bank foreign exchange system. Integrated post-trade deal tracker service with Thomson Reuters' existing modules to build a novel cloud-based FinTech solution. Worked as a team player based on agile methodology across diverse cultures. 	
	Teaching Assistant	Feb 2019 - May 2019
	<i>Faculty of Engineering — Chulalongkorn University — Thailand</i> <ul style="list-style-type: none"> Assisted Assoc. Prof. Atiwong Suchato in teaching 2110221 Computer Engineering Essentials. Prepared materials as well as graded several coursework items. Helped students with their in-class activities. 	
	Research Intern	May 2018 - Jul 2018
	<i>Numao Laboratory — Osaka University — Japan</i> <ul style="list-style-type: none"> Worked in a research lab with Prof. Masayuki Numao as my supervisor. Applied machine learning techniques, e.g. CNN and SVM, to recognize emotions from brainwave patterns. Was involved in some parts of signal processing using EEGLAB. 	
PUBLICATIONS	A Comparative Study of Window Size and Channel Arrangement on EEG-Emotion Recognition Using Deep CNN	
	<i>Panayu Keelawat, Nattapong Thammasan, Masayuki Numao, Boonserm Kijisirikul</i> Sensors, 2021	
	Subject-Independent Emotion Recognition During Music Listening Based on EEG Using Deep Convolutional Neural Networks	
	<i>Panayu Keelawat, Nattapong Thammasan, Boonserm Kijisirikul, Masayuki Numao</i> IEEE International Colloquium on Signal Processing & Its Applications (CSPA), 2019	
SELECTED PROJECTS	EEG-based Emotion Recognition During Music Listening	
	<ul style="list-style-type: none"> Applied ML techniques to brainwaves retrieved from frontal lobe with a will to gain more insights from emotion recognition problem in EEG induced by music. Focused on subject-independent and subject-dependent emotion recognition regarding hemispheric differences by using CNN to obtain spatiotemporal inputs. 	

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.
- Link to write-up: <https://gpanayu.github.io/pdf/ECE225AProject.pdf>

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.
- Link to blog (in Thai): <https://medium.com/@chaluviengchai/speech-to-text-aws-transcribe-vs-google-cloud-speech-api-vs-microsoft-azure-cognitive-f854d4087fdb>

Vision-based Crowd Density Reporting System

- Combined ML and Internet-of-Things (IoT) to produce a real-time crowd density reporting application.
- Developed a mobile application compatible with both iOS and Android.
- Deployed and tested in cafeteria, Faculty of Engineering, Chulalongkorn University.
- Received 1st runner-up in national IoT competition.

CU Event Hub

- Gathered all events in Chulalongkorn University (CU) into one place.
- Led backend team which covered both development and deployment on cloud.

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 link: <https://www.coursera.org/account/accomplishments/specialization/certificate/HHLPUG6T83V>