Dawanit (Neal) Satitsumpun

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Education

University of Wisconsin-Madison May 2021

Bachelor of Science in Computer Engineering and Computer Sciences

GPA: 3.93/4.00

Coursework: Data Structures, Algorithms, Operating Systems, Database Management Systems, Graduate Machine Learning, Artificial Intelligence, Microprocessor Systems, Computer Architecture, Introduction to Finance

Programming Skills

Languages: Python, Java, C/C++, JavaScript, Scala, MATLAB, SQL, HTML/CSS,
Frameworks/Tools: React, React Native, Django, Tensorflow, Keras, Bootstrap, Linux, Git, Github, Docker

Experience

Software Engineer Intern, Agoda, *Bangkok, Thailand* June 2019 – Aug 2019

- Developed a web-based tool to generate code for new REST API endpoints automatically to the team repository using Github API in **Scala.js**. The code generated includes routes, unit tests, integration tests, Swagger, SQL table.
- Fixed bugs for customer-data API endpoints in **Scala** including exception message, dashboard response log.
- Fixed bugs for customer-data back-office application in **C# .NET**.

Software Engineer Intern, Buzzfreeze Solution, *Bangkok, Thailand* June 2018 – Aug 2018

- Developed the frontend of promotion management mobile application in **React-Native**.
- Incorporated backend APIs and Implemented new features such as QR Code Scanning, searching, user authentication, routing, and embedded Google Maps.

Projects

Image Dictionary, Personal Project

- Developed dictionary (with image) web application in **React** and **Django**.
- Used Merriam-Webster Dictionary API and Google Custom Search API for looking up word's definitions and images.
- Implemented REST APIs for user authentication, user registration, and word query history to **PostgreSQL** database.
- Deployed the frontend on Netlify and the backend on DigitalOcean using **Docker**.

Autonomous Go-kart Race Path Planning, Wisconsin Autonomous Club

- Worked with a team of 8 students to develop the driving functions of an autonomous go-kart.
- Implemented a real-time local path planning using an open-source robotics algorithm (Model Predictive Trajectory Generator) in **Python**.
- Integrated path planning to proportional–integral–derivative (PID) controller for the vehicle to follow in simulation.

Meme Image Recovery, Personal Project

- Developed an application that can recover an original image from a meme image in **Python**.
- Utilized Google Cloud Vision API to remove the text from meme image and incorporated an open-source machine learning model in TensorFlow (Generative Image Inpainting with Contextual Attention) to recover the removed regions based on the context of the image.
- Worked with Professor Vikas Singh to research the methods to improve the performance of the pipeline.

Skin Lesion Analysis, AI Club

- Developed a computer vision algorithm to separate the skin pixels that have lesion from the pixel that does not.
- Implemented and trained an SVM(Support Vector Machine) model for background-foreground skin lesion segmentation using scikit-learn **Python** library.

Wireless Pong Game, Intro to Microprocessor Systems (ECE353)

- Co-developed an interactive wireless Pong game on Tiva-C LaunchPad using **C**.
- Implemented wireless communication, game physics, and user input handling by utilizing UART, EEPROM, I2C, and SPI interfaces.

Awards

12^{nd}/202 (teams), North Central North America ACM-ICPC, 2018
25^{th}/90, Silver Medal, Thailand Olympiad in Informatics 2015

Leadership

Vice President, Thai Student Association at UW-Madison, 2019