Michael (Wen Tao) Mo

Email: michaelmoshui@gmail.com   Phone: 6044016992   Portfolio: https://michaelmoshui.github.io/home/   GitHub: https://github.com/michaelmoshui

EDUCATION

The University of Toronto, Toronto, ON, Canada　　　　　　　　　　　　　*Class of 2026*
BASc, Engineering Science *(CGPA: 3.88/4.0)*

➤ *Relevant Coursework: Intro to Computer Programming in Python (A+), Data Structures and Algorithms in C (A+)*

SKILLS

➤ **Computer:** JavaScript, Python, C, Java, full-stack web development, NodeJS, Express, React, MongoDB, Mongoose, MATLAB, TensorFlow, NumPy, Pandas, VBA Script
➤ **Additional:** self-motivated, problem-solving, communication, detail-oriented, organization, time management

WORK EXPERIENCE

King Mongkut's University of Technology, Thonburi Machine Learning Intern (Thailand)　　*May 2023 – August 2023*

Parkinson's Disease Freezing of Gait Detection

➤ Expanded a transformer encoder model with LSTM layers in TensorFlow that detects Parkinson's disease freezing of gait events in time-series acceleration data.
➤ Focused on exploring the effect of using different feature sets in making predictions.
➤ Model achieved a top 10% score in Kaggle's Parkinson's Disease Freezing of Gait Prediction competition.
➤ Utilized pseudo-labeling on unlabeled data and different cross fold validations to generate more robust models.

Fall Risk Assessment

➤ Collaborated with Bioengineering researchers in analyzing the fall risk of elderly with walking sensor signal.
➤ Preprocessed acceleration signals by doing frequency filtering and movement type segmentation with SciPy statistical analysis methods.

Ignite Badminton Club Coach/Software Developer　　　　　　　　　　　　*April 2022 – Present*

➤ Delivered badminton lessons to groups of 10 to 12 intermediate badminton learners.
➤ Develop club website using React and NodeJS framework with program information and contact, career application features.

S.U.C.C.E.S.S. Summer Worker (Coquitlam, BC)　　　　　　　　　　*June 2021 – September 2021*

➤ Organized outdoor activities for toddlers and parents and received positive feedback on program planning.
➤ Created efficient client information search algorithm in the database with Excel VBA Script that decreased search time from 30 minutes to 5 minutes.

PROJECTS

BlueDraw (KMUTT SIT Hackathon 2023) – MongoDB, Express, React, NextJS　　　　*May 2023*

➤ A web app that allows user to draw on a digital whiteboard with free hand motions captured by the webcam.
➤ Implemented hand motion tracking using Google MediaPipe Computer Vision API.
➤ Implemented digital whiteboard using Perfect Freehand NPM package.
➤ Created dynamic user interface using React.
➤ Created NextJS RESTFUL APIs and MongoDB data storage to build a social media platform with register, login, posting, and add friend functionalities.
➤ Used cookies and Jotai state container to keep track of user data after login.

Chat2Cart Ignition Hack 2023 – Python Flask, React　　　　　　　　　　*August 2023*

➤ A web app that allows users to enter a description of the product they want and receive Amazon product results.
➤ Incorporated ChatGPT 3.5 and Amazon search API in Python Flask for product result generation.
➤ Created interactive chatbot and result display page with React.

Simply Supported Beam Design – MATLAB　　　　　　　　　　　　　　*August 2023*

➤ Optimized the geometry of a matboard beam that is subjected to a moving train load by automating stress calculations and structural property calculations in MATLAB.
➤ Hand-constructed a 1.26-meter beam that supported 700 Newtons of train load (top 25% of all beam designs).