Hao-Yu, Chan

GRE: 322

Linkedin•Github•Gmail•Portfolio

Education

National Taiwan University *Sep. 2019-Jul. 2023*

Bachelor of Science, Biomechatronics Engineering

- *Last 60: 3.70/4.30, Overall: 3.67/4.30*
- *Course: Mechtronics and System Design, Electrical Engineering and Laboratory, Electronics and Laboratory, Digital Systems Design and Laboratory, Machine Learning, Automatic Control, Data Structure and Algorithm, Linear Algebra, System Dynamics, Robotics(Coursera), System Identification, Optimal Control, Digital Control System*

Research Experience

Research Assistant, Full-Time *Jun. 2023-Present*

Center for Artificial Intelligence and Advanced Robotics (AIROBO), Advisor: Li-Chen, Fu

Related Skills: Java, SQLite, PHP, Python, Android Studio

- ***Topic: Companion Healthcare Aid Robot Manager for Caring of the Elders (CHARM)***
  - *Develop and maintain the Android APP for a robot used to interact with elders*
  - *Developed a chatbot mode, making the robot capable of chatting with elders and going into certain functions by analyzing the input message using LLMs.*
  - *Developed a script for the robot to introduce its functions to the elders.*

Undergraduate Research Assistant, Part-Time *Jul. 2021-Nov. 2022*

Robots and Medical Mechatronics Lab (RMML), Advisor: Ping-Lang, Yen

Related Skills: C/C++, Matlab, Python, Nvidia Jetson TX2, TI F28388D, SolidWorks, ROS

- ***Topic: System Integration for Autonomous Vehicles in Greenhouse***
  - *Assist in developing the autonomous vehicle, designing the vehicle's electric circuit and realization, servo control and PID control on the motors used on the vehicle, improved the measurement of the vehicle's RPM, using ROS to control the autonomous behavior of the vehicle.*
  - *Apply Extended-EKF on the vehicle to estimate the position of the car.*
  - *Calculated the slip ratio in real time of the vehicle using the location measured from Extended-EKF, later used to improve the localization using encoders only.*

Work Experience

Teaching Assistant, Part-Time *Dec. 2021-May. 2022*

HSIN-JER Cram School

- *Solve math problems for high school students, write answers for their midterm tests, and help the students with their math homework.*

Teaching Experience

Teacher of Biomechatronics Engineering Summer Camp   *Jul. 2021*

- *Taught the students at the camp Arduino, SolidWorks, Python*

Teacher of SDHS's summer tutoring   *Jul. 2017-Aug. 2017*

- *Taught the junior high students Math, Science, and English, to help them prepare for their Comprehensive Assessment Program for Junior High School Students (CAP)*

S K I L L S

Programming: *Python, Matlab, Java, C/C++, Git, Latex*

System: *Nvidia Jetson TX2, TI F28388D, Raspberry Pi, Arduino, NodeMCU, Ubuntu*

Software: *SolidWorks, ROS, Android Studio*

English proficiency: *TOEFL 99, TOEIC 915 (Expired)*

Extracurricular

Leader of the Student Academic Affairs of the department

- *Helped the students in the department with their academic affairs and arranged open houses for labs*

The administrator of the machines in the department factory

- *I taught the students who wanted to use 3D printers, laser cutting machines, CNC, etc… And I also maintained the machines as well.*

The organizer of an event for undergraduate students

- *I held the BBQ event with one of my classmates for more than 120 students and got sponsored by a beer company*

Member of the Basketball team in the Department

- *We got second place in the basketball game held by the University*

Leader of the Baseball team in the Department

- *Led the team to play in multiple games, planned the practices, and hosted multiple friendly matches*

Attended AWS Virtual Circuit in AWS DeepRacer

- *Attended multiple AWS DeepRacer Virtual Circuits, got into the top 10% each time*

Volunteer at SDHS summer camp for students with special educational needs

- *Led a group of five students with special educational needs throughout the summer camp (2 weeks)*

Volunteer at a local library

- *Helped the librarians to put books back on the shelf and helped the users to return their books*

Volunteer at a remote school

- *Helped local artists with their mosaic wall at the remote school*

Certificates

Matlab

- *Machine Learning Onramp, Data Processing and Visualization*

Coursera

- *Writing in the Sciences, Stanford Online*
- *Robotics (1), National Taiwan University*
- *Programming for Business Computing in Python (1), (2), (3), National Taiwan University*