

Frank Hsu

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Summary

I am now studying electrical engineering in UNSW and my course division is system and control. I am interested in implementing control theory in real world such as motor speed control and water level control. I also spend time on embedded system and coding which are important for realizing control algorithm with digital controller.

Education

02.2021 – Present	The University of New South Wales <i>Master of electrical engineering</i>	Sydney, Australia
09.2014 – 06.2018	National Tsing Hua University <i>Bachelor of Science in Power Mechanical Engineering</i>	Hsinchu, Taiwan

Work Experience

06.2019 – 10.2020	Academia Sinica (Institute of Physics) <i>Research Assistant</i> <ul style="list-style-type: none">Design X ray tomography light path system including CAD design and manufacturing.Build communication UI on PC to send and receive signal of a robot controller (With RS-232)Design robot path planning for replacing experiment samples.	Taipei, Taiwan
05.16.2022 – 05.28.2022	Academia Sinica (Institute of Information Science)	

Project Experience

09.2017 – 01.2018	Self-Driving Vehicle <ul style="list-style-type: none">Integrate motor control, computer vision and Bluetooth communication, based on ROS.Implement digital PI control algorithm development.Build coordinate system based on Apriltag	National Tsing Hua University
01.2017 – 06.2018	NTHU Racing Team <i>A team for building a race car and participating Formula Student competition in Japan.</i> <ul style="list-style-type: none">Lead steering system group to design and manufacture steering system hardware.Design battery management circuit (BMS) for low voltage system. Controls charging and discharging operation of a battery pack (Using four 21700 in series).Use Altium designer to produce schematic and PCB layout file.	National Tsing Hua University
06.2021 - 08.2021	OV7670 camera with STM32 <ul style="list-style-type: none">I2C communication between camera and the microcontroller.DCMI programming.Direct Memory Access (DMA) programming.	

Skills

Programming

C, Python

Software & OS

Altium designer, Solidworks, Matlab, Git, Linux ubuntu, ROS

Hardware

STM32