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Education

Swiss Federal Institute of Technology in Lausanne(EPFL)

Lausanne, Switzerland

*Master of Science in **Robotics***

Sept. 2021 - June. 2024 (expected)

- GPA: 5.50 / 6; Minor in **Computer Science**

Tsinghua University

Beijing, China

*Bachelor of Engineering in **Automation***

Aug. 2016 - Jul. 2021

- GPA: 3.61 / 4; Minor in Technology Innovation & Entrepreneurship on Connected Devices

Professional Experience

Engineering Intern at Logitech Europe S.A.

Lausanne, Switzerland

High Accuracy Time Synchronization over Bluetooth Low-Energy

Dec. 2023 - Jun. 2024

- Designed and implemented time synchronization over BLE at the sub-microsecond level;
- Implemented both central and peripheral BLE HID applications.

Intern at ABB Schweiz AG

Baden, Switzerland

Modular software architecture for P&C in Substation Automation

Apr. 2023 - Oct. 2023

- Devised scripts to benchmark the performance of the platform on real-time Linux on multiple hardware devices with varying power and compute resources;
- Analyzed the outcome of the experiments and summarized the major patterns with charts to provide conclusions on deployment advantages and limitations;
- Worked in designing and implementing a decentralized modular real-time data exchange scheme.

Intern at Aqrose Technology

Beijing, China

Exploration and Implementation of Motion Planning Algorithm

Jul. 2019 - Sep. 2019

- Reviewed and synthesized the literature on variances of RRT algorithms(a family of path-planning algorithms);
- Implemented a proactively obstacle-avoiding planning algorithm based on a state-of-artBIT* Algorithm in OMPL(C++) which achieved an increase of the average clearance by 100% with less planning time.

Project

Fixed-base Manipulator Throwing

Prof. Aude Billard

Learning Algorithm and System Laboratory(LASA), EPFL

Sept. 2022 - Jan. 2023

- Adapted current mobile-base solution to fix-base manipulators and accelerated the algorithm 20x.
- Explored the bottle flip challenge with a robot arm.

Interdisciplinary Robot Competition

School of Engineering, EPFL

Feb. 2022 - Jun. 2022

- Designed and implemented a soft-gripper robot to collect PET bottles in various terrains.
- Implemented an object detection model(TensorFlow) on Raspberry Pi to detect the bottles;

- Implemented navigation to explore and collect bottles while avoiding obstacles based on an Arduino;
- Won the first place for collecting the most bottles.

A Gloves-based Joint Pose Sensing System

Advisor: Prof. Song-chun Zhu

Center for Vision, Cognition, Learning, and Autonomy (VCLA) at UCLA

Jul. 2020 - Sep. 2020

- Designed and implemented a lighter and more effective version of a joint pose sensing glove
- Constructed a welding and testing platform at home for experimental in remote

Module Desk Robot

The Future Laboratory

Sep. 2019 - Jan. 2021

- Designed and implemented a module desk robot communicating via infrared; Practiced skills in circuits design, appearance design, PCB design and testing, programming for sensing and communication, and function analysis

Footroller: Game Shoes for the Handicapped

Technology Innovation & Entrepreneurship Minor

Sep. 2018 - Jan. 2020

- Developed a prototype of smart shoes mapping foot gestures to electronic device control in order to assist with the entertainment of the arm-disabled group
- Designed a set of interactive rules to translate foot gestures to system instructions;
- implemented the hardware device sensing the actions and a Python program turning sensor data into system operations
- Awarded **Third Prize** in 2019 China-US Young Maker Competition in Beijing

ROS-based Baxter Experiment Platform

Intelligent Robot Laboratory

Sep. 2018 - May. 2019

- Collected, translated the manuals, and devised experimental tasks for the development on the Baxter Robot.
- Developed a robot gobang (a chess game) player with humans which integrates image processing in MATLAB and Python, ROS communication, gobang AI and Robot manipulation in C++ and Python
- Developed a pose tracker mimicking human pose through skeleton extraction and pose mapping
- Presented demos in the lab on School Day, attracted an audience of over 100
- Awarded **Second Prize** in Excellent Project of Students Research Training and **First Prize** of 30th Student Laboratory Construction Contribution Award

ATM: The Histamine Receptor Based Whole-Yeast Sensor

Advisor: Prof. Xiaowo Wang

Tsinghua-A iGEM Team

Sep. 2017 - Oct. 2018

- Implemented a portable device for fast in-vitro allergy tests based on Arduino
- Submitted to the *International Genetically Engineered Machine Competition (iGEM) 2018* as Team Tsinghua-A; presented the project with the whole team in Boston; awarded **Gold Medal**

Skill

Robotics Reinforcement Learning, Model Predictive Control, Machine Learning, Motion Planning

Embedded System BLE application development, Arduino, Raspberry Pi, PCB Design and welding

Programming C/C++, Python, MATLAB

Language

Chinese: Native

English: Advanced

French and German: Elementary

AGE 26 NATIONALITY China MARITAL STATUS Single
