Qian (Peter) Wang

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EDUCATION

University of Southern California   **Aug 2020 – May 2024**

BS in Computer Engineering and Computer Science

BA in Applied and Computational Mathematics   *GPA: 3.92/4*

- Coursework: Artificial Intelligence; Machine Learning; Algorithms & Data Structures; Software Engineering; Distributed Systems and IoT; Embedded Systems; Applied Python; Probability Theory; Linear Algebra; Optimization; Statistics
- Awards: 2020 & 2021 USC Dean's List, Academic Achievement Award Scholarship
- Campus Job: Teaching Assistant for EE 109 - Intro to Embedded Systems

SKILLS

PROGRAMMING LANGUAGES

Proficient: Python, C/C++, Java, JavaScript, HTML/CSS

Moderate: R, PHP

Basic: MATLAB

TECHNOLOGIES & FRAMEWORKS

Django, Flask, Git, SciKit-Learn, Numpy, Pandas, Matplotlib, Linux Embedded Systems, FreeRTOS, IoT, ROS, SLAM, Feedback Control Systems, Multi-legged Robot, HAL, Altium Designer, STM32

WORK EXPERIENCE

Undergraduate Research   **Los Angeles, CA, USA**

Research Assistant   Aug 2022 – Present

- Develop learning and planning algorithms for multi-robot and human-robot systems as well as robotic systems for real-world problems

Honeybee Robotics   **Altadena, CA, USA**

Software Engineer Intern   May 2022 – Aug 2022

- Tasked with developing an operator console on YAMCS Studio to communicate with the ground station YAMCS for displaying incoming telemetry data and sending control commands to the space mining drill
- Crafted a simulator for the drill using python that's able to emulate responses after receiving tele-commands
- Both projects will be used in the PRIME-1 and VIPER missions to the South Pole of the Moon in 2023

Undergraduate Research (CURVE)   **Los Angeles, CA, USA**

Research Fellow   Aug 2021 – May 2022

- Worked on the design and control of a light-weight low-cost quadruped robot under the mentorship of Dr. Quan Nguyen at the Dynamic Robotics and Control laboratory at USC
- Co-lead the software control sub team and develop impedance and force control on the robot legs
- Developed and troubleshooted electrical hardware for the robot's 8-joint actuator system

FIRST Robotics (FRC)   **Mission Hills, CA, USA**

Software Mentor   June 2020 - Present

- Hundreds of hours dedicated to mentor high school students focusing on design, integration, and iteration for electrical, software, and control system equipment for autonomous robot

PROJECTS

Ctrl-F   Dec 2021 - Present

A web platform to bridge students and faculties over research and internship opportunities to cover the blank of similar products in the market

- Work on developing backend using Java Spring boot, API interface testing, and managing email with SMTP
- Collected professors' and students' feedback over the platform, to improve the project with new functionalities, including google sign in/up options, and multiple combination of filters for searching positions

NBA Data Web   Jul 2021 - Aug 2021

(https://github.com/pwang649/NBAWeb)

An AI-coaching and data visualization webapp for NBA basketball

- Developed an AI strategizing and data analysis website for NBA using Django and machine learning
- Used classification and ML algorithms such as K-means, random forest classifier, cosine similarity to analyze data scraped from the NBA website and form the relating AI strategy

ROS Robot   Aug 2019 – Aug 2020

A hobbyist project made to achieve autonomous driving using cheap materials that everyone can build on their own

- Built a personal ROS-based lidar-bot using Lego, lidar, Jetson nano, and STM-32 motor controller board
- Experimented map construction and self-navigation using SLAM, as well as image processing and line tracking with OpenCV