Chenda Duan

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# Education

## University of California, Los Angeles (UCLA), School of Engineering, Los Angeles, CA

Bachelor of Science in Computer Science, GPA: 4.0/4.0 2019.09 – Expected 2022.06

Related coursework: Introduction to Computer Science I, Introduction to Computer Science II, Introduction to Computer Organization, Logic Design of Digital Systems, Software Construction Projects, Operating System Principles, Programming Languages, Algorithms and Complexity, Intro to Computer Vision, …………………………………..

# Research Experience

## UCLA Structure-Computer Interaction Lab

Undergraduate Researcher 2020.06 –

**Low-Cost Autonomous Weed-Control Agri-Robot Project**

* Developed a robotic navigation algorithm for the 2D LiDAR-based road identification system and improved the navigation accuracy for the robot while maintained at low cost.
* Built a simulation environment using Gazebo to test the robotic navigation algorithm.
* Developing VI-SLAM, a Visual-Inertial Simultaneous Localization and Mapping Algorithms to further improve the navigation and localization performance of the robot.
* Trained a model for crop identification using yolov5, an object detection architecture to improve the identification capability at the sparse crop environment (where 2D-Lidar performance is poor).

**Soft Robots Project**

* Used inverse learning approach to train a model to generate the physical parameters for the soft robot.

## UCLA Center for Neurobehavioral Genetics

Undergraduate Researcher 2020.06 –

**eQTL Mapping Project**

* Process RNA sequence data eliminating useless data to feed CiberSort, TWAS-Fusion and other state of art algorithm.
* Perform Principal Component Analysis (PCA), data visualization and other data analysis using R.

# Publication

Tommer Schwarz, Toni Boltz, Kangcheng Hou, Merel Bot, **Chenda Duan**, Loes Olde Loohuis, Marco P. Boks, René S. Kahn, Roel A. Ophoff , Bogdan Pasaniuc, “Powerful eQTL mapping through low coverage RNA sequencing”, submitted to The American Journal of Human Genetics and is currently under review*.*

# Course Project

Tommer Schwarz, Toni

# Honors and Awards

Dean's List, UCLA Fall 2019 – Spring 2021

Patent: Ferris Shelf(Utility Model Patent # ZL 2017 2 0414471.6, Issued in June 2018 in China)

# Leadership/Extracurricular Activities

## UCLA Bruin Space Club

Co-leader of the software sub-team and Project Overseer 2019.10 –

* Developed a platform for scientific payload using a high-altitude balloon
* Monitor and control the status of the balloon on Raspberry Pi and Xbee
* Planning updated high-altitude balloon launches
* Provided Python tutorial sessions for the new club members

# Skills and Interests

* Computer Skills: C, C++, Python, Shell. Familiar with ROS, Robot Operating System
* Language: English (fluent), mandarin (native speaker)
* Hobbies: Dual keyboard electone, basketball