Chenda Duan

Los Angeles, CA 90024
310-254-5864 | chenda@ucla.edu
linkedin.com/in/chenda-d | github.com/Dadaism6 | chendaduan.com

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
Dean's Honors List   2019 – 2022

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

Master of Science in Computer Science (Admitted)   Expected 2022.09 – Expected 2023.06

Technical Skills

· Language: Python, C++, Java
· Database: MySQL, MongoDB
· Others: Robotics, CV, ML, NLP

Work / Research Experience

UCLA Structure-Computer Interaction Lab

Undergraduate Researcher   2020.06 –
   Low-Cost Autonomous Weed-Control Agri-Robot Project
· Using C++ and Python, developed a robotic navigation algorithm for road identification system, based on 2D LiDAR sensor, and improved the navigation accuracy by 30% (compared with mutli-Ransac and Pearl) for the robot while maintained at low cost.
· Built a simulation environment using Gazebo and ROS to test the robotic navigation algorithm.
· Modifying VI-SLAM, a Visual-Inertial Simultaneous Localization and Mapping Algorithms to further improve the navigation and localization performance of the robot, using C++.
· Used the combination of object detection mechanism and key-point matching to perform robust row counting on the crop land using Python, increase the performance by 40%.
   Soft Robots Project
· Used inverse learning approach to train a model to generate the physical parameters for the soft robot, mainly using Tensorflow, increase the efficiency of collecting the parameters by 90%.

UCLA Center for Neurobehavioral Genetics

Undergraduate Researcher   2020.06 –
   eQTL Mapping Project
· Using Python and R, process RNA sequence data eliminating useless data to feed CiberSort, TWAS-Fusion and other state of art algorithm.
· Perform PCA, data visualization and other data analysis using R.

Course Project

Basketball-shooting   2021.10 - 2021.12

    An online basketball-shooting game, based on JavaScript and WebGL.

    Advanced graphic features, including shadow, texture, and reflections. Using only a lite version of
    WebGL called Tinygraphics, which contains basic geometry definition vector calculation functions.

    Play the game at: https://basketball-shooting.herokuapp.com

    Source code at: https://github.com/Dadaism6/CS174A_PROJ

Egglendar Online Calendar   2020.10 - 2020.12

    Designed an online student calendar specially for international students.

    Using Bootstrap and Material-UI for designing the front-end interface, and MySQL as the database.

    Project is open-source and can be found at:

    https://github.com/Clumsyndicate/Smart-Calendar-Frontend

    https://github.com/Clumsyndicate/Smart-Calendar-backend

GooberEats-Delivery Path Planner   2020.2-2020.3

    Designed a path planner program using C++ that can generate the shortest path for delivering several
    packages in west Los Angeles area.

    Using a modified version of A* algorithm, together with optimizations using simulated annealing.

Kontagion-Game   2020.1-2020.2

    A 2D game similar to "aircraft battle", Developed using C++ and freeglut utility library