OLIVIA LOH

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EDUCATION

University of California, Los Angeles (UCLA)   Expected 06/2022
B.S. Computer Engineering, Minor in Film, Television, and Digital Media (FTVDM)
- GPA: 3.55
- Honors: UPE (International Honor Society for the Computing and Information Disciplines) Member
- Course Work:

Data Structures	Computer Organization	Software Construction Lab
Object-Oriented Programming	Algorithms & Complexity	Operating Systems

TECHNICAL SKILLS

Programming Languages: C/C++, Java, Python, Bash, x86-64 Assembly Language
Software/Dev Tools: Linux, Git, Arduino, Code::Blocks, Eclipse, Xcode, Microsoft Visual Studio, Spyder, PyCharm

WORK EXPERIENCE

Outcome Driven Innovation (ODI), *Student Intern*   8/2020-present
- Improve the performance of the existing thermal imaging (C/C++ and Python) software
- Conducting research to enhance pixels computational algorithms as well as video quality
                                                                                          6/2017-5/2018
- Utilized Linux commands to flash firmware image into enterprise water leak detection IoT router and test the internet communication through ethernet, cell-modem, public switched telephone network modem

Transfer Bridge to UCLA Samueli Engineering, *Undergraduate Mentor*   6/2020-9/2020, 8/2019-9/2019
- Mentored incoming CS/EE transfer students in rigorous engineering bootcamp and 3-day hackathon
- Prepared curriculum for and taught data structures and object-oriented programming in C++
- Assisted students in creating their video game projects coded in C++ and their hackathon projects
- Led Python workshop introducing students to tkinter library and on building a Desktop GUI in tkinter
- Led workshop on hardware-setup and Arduino programming for Bluetooth app communication
- Designed 2-D mapping algorithm for hack prototype, autonomous object-detection/mapping car
    o Programmed car and ultrasonic sensor controls using Arduino
    o Implemented Bluetooth communication between Arduino and Python

ACTIVITIES

UCLA IEEE (Institute of Electrical and Electronics Engineers), *Member*   9/2019-3/2020
- Implemented PID control algorithm for IR sensors on Micromouse (autonomous 16x16 maze-solver) in STM32Cube platform (C/C++)
                                                                                          9/2018-6/2019
- Created IMU gyroscope sensors' feedback loop algorithm to tilt-control a car using Arduino (C/C++)

ASME X1 Robotics, *Electrical/Controls Team Member*   9/2019-3/2020
- Programmed Arduino-controlled servos & stepper motors for delivery system of human-interaction bot
                                                                                          9/2018-6/2019
- Worked on coordinate scaling, adding, & transformation functions in Python for hexapod gait algorithm

ENGINEERING PROJECTS

PacMan AI, *(E96A: Intro to Engineering Design: AI)*   3/2020
- Designed evaluation function for PacMan reflex agent to win the game
- Implemented several search algorithms, Mini-max, Alpha-beta pruning, and Expecti-max, to enhance PacMan's game play

Catastrophe, *UCLA Hack on the Hill Project*   2/2020
- Designed home-screen and camera interface of a face filter app that transforms human faces into cat faces using React Native (Javascript) on Expo platform

Zombie Dash, *CS 32: Introduction to Computer Science II Course Project*   3/2019
- Coded game objects and their respective actions (in C++) that are called in the main loop for video game
- Used the concepts of object-oriented programming to support organized, maintainable code