Yu-Cheng Deng

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EDUCATION

University of California, Davis — Davis, CA, USA
M.S. in Electrical and Computer Engineering (ECE), Overall GPA: 3.88/4.00 — Sep. 2018 – Jun. 2020

National Taipei University of Technology — Taipei, Taiwan
B.S. in Electrical Engineering (EE) — Sep. 2014 – Jun. 2018

SKILLS

- **Programming Languages:** Python, MATLAB/Simulink, C/C++, C++/CLI, R, HTML/CSS, JavaScript
- **System Test:** Robot framework, CAN bus (PEAK-System, CANoe/CAPL Scripting)
- **Software Development:** Image Processing, Computer Vision, Object-oriented Programming, Machine Learning
- **Technical Skillset:** Git, Bash (Shell Scripting), RestAPIs (Jenkins, Jama, Artifactory), Open CV, Linux, Windows, macOS

WORK EXPERIENCE

Rivian Automotive LLC — Palo Alto, CA, USA
System Test Engineer - Infotainment — Aug. 2020 – Present

- Designed the smoke test automation and developed smoke test automation framework
- Developed test automation frameworks for vehicle access system for electric vehicles
- Developed utility tools using restAPI and Python for system test cases management in Jama

Wintec Industries — Newark, CA, USA
Junior Test Engineer — Jun. 2019 – Aug. 2019

- Created a File Transfer Protocol (FTP) Server in Linux to which the operating machines can transfer the files
- Built the script with GUI written in C++/CLI to achieve the automatic file transfer through FTP
- Used Computer Vision approach for calculating the productivity of the Printed Circuit Board (PCB) and monitoring the production lines by programming Python and Open CV into Raspberry Pi 4 integrated with Pi camera

RESEARCH EXPERIENCE

Graduate Researcher (Master's Research) — Apr. 2019 - May. 2020

- Worked on "improved visualization of fiber-based fluorescence lifetime imaging (FLIm) in a Clinical Setting" research
- Applied algorithms and image processing to FLIm data visualization for the classification of tumors
- Proposed a robust algorithm for real-time visualization for tumor delineation based on the clinical applications
- Constructed a Graphical User Interface (GUI) tool in MATLAB for FLIm data visualization for research purposes
- Publication: *"FLImBrush: dynamic visualization of intraoperative free-hand fiber-based fluorescence lifetime imaging," Biomed. Opt. Express 11, 5166-5180 (2020)*

Coursework Project- Improvement in Reinforcement Learning for Frogger Game — Jan. 2019 - Mar. 2019

- Regenerated the arcade game "Frogger game" using PyGame in Python
- Applied the reinforcement learning (Q-learning) to the Frogger game and analyze the performance
- Exploited nearest neighbor interpolation approach to improve the performance of the Q-learning for the Frogger game

Coursework Project- Human Following Robot Based on Reactive Algorithm for Safe Navigation — Jan. 2019 - Mar. 2019

- Utilized Simulink toolbox and MATLAB script to simulate the human following robot (Pioneer 3-DX) and its sensors
- Constructed a simulation environment and formulated performance analysis strategies
- Applied biological obstacle-avoidance algorithm to the robot and analyzed it in the synthetic environment

LEADERSHIP EXPERIENCE

Vice President - Taiwanese Graduate Student Association (TGSA) at UC Davis — Jun. 2019 - Jun. 2020

Chief Executive - Student Union of EE Dept. at National Taipei University of Technology — Sep. 2015 - Dec. 2016