Yu-Cheng Deng

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EDUCATION

- University of California, Davis — Sep. 2018 - Jun. 2020 (Expected)
  - **Master of Science in Electrical and Computer Engineering (ECE)**
  - GPA Overall: 3.88/4.00
- National Taipei University of Technology (NTUT), Taiwan — Sep. 2014 - Jun. 2018
  - **Bachelor of Science in Electrical Engineering (EE)**

WORK EXPERIENCE

Wintec Industries — Newark, CA

- **Junior Test Engineer** — Jun. 2019 - Aug. 2019
  - Build a File Transfer Protocol (**FTP**) Server for productions lines for transmitting the log files from the machines
  - Write **C++/CLI** script to build a user-friendly Graphical User Interface (GUI) for the operators to use FTP
  - Use **Raspberry Pi 4** and **Pi camera** using **Open CV** and Moving-Object Surveillance approach in **Python** to create a tool for calculating the productivity of Printed Circuit Board (PCB) and monitoring the production line.

RESEARCH EXPERIENCE

University of California, Davis — Davis, CA

- **Master Research-** Improved Visualization of Fiber-based Fluorescence Lifetime Imaging in a Clinical Setting — Apr. 2019 - Present
  - Apply algorithms to visualize fluorescence lifetime imaging (FLIm) data
  - Build a Graphical User Interface (GUI) for data visualization using **MATLAB**
  - Investigate Real-time Visualization approach for clinical application

  Advisor: Prof. Laura Marcu (Department of Biomedical Engineering, UC Davis)
- **Coursework Project-** Improvement in Reinforcement Learning for Frogger Game — Jan. 2019 - Mar. 2019
  - Regenerate the arcade game "Frogger game" using **Python** with PyGame
  - Apply the Q-learning algorithm to Frogger game and analyze its performance
  - Exploit nearest neighbor interpolation approach to improve the performance of Q-learning for Frogger game
- **Coursework Project-** Human Following Robot Based on Reactive Algorithm for Safe Navigation — Jan. 2019 - Mar. 2019
  - Build a simulation environment in **MATLAB/Simulink**
  - Utilize **Simulink toolbox** and **MATLAB** function to simulate a human following robot (Pioneer 3-DX)
  - Apply biological obstacle-avoidance algorithm to robot and its sensors and analyze the performance of the robot

National Taipei University of Technology — Taipei, Taiwan

- **Senior Project-** Care System for Pressure Ulcers Patient — Jun. 2017 - Dec. 2017
  - Exploit the **Arduino** sensors to gauge the major factors (humidity, temperature, pressure, etc.) in causing ulcers
  - Employ Arduino Wi-Fi transmission to transmit sensor data to **IoT** platform, **BLYNK** and **ThingSpeak**
  - Use **PHP** with **MySQL** to transmit data to database and create webpage for Server and Client to achieve the close interaction

SKILLS

- Language skills:
  - Mandarin (native)
  - English (proficient)
- Programming Language:
  - Python
  - MATLAB/Simulink
  - C/C++
  - C++/CLI
  - R
  - HTML/CSS
  - Assembly Language
- Software skills:
  - Git
  - Linux (Ubuntu)
  - Debian
  - MacOS
  - Visual Studio Code
  - Visual Studio
  - MySQL
  - Xcode

LEADERSHIP EXPERIENCE

- **Vice President** - Taiwanese Graduate Student Association at UC Davis — Apr. 2019 - Apr. 2020
- **Chief Executive Officer** - Student Association of EE Department at NTUT — Sep. 2015 - Dec. 2016
- **Minister of Secretary Department** - Student Association of EE Department at NTUT — Sep. 2015 - Dec. 2016