Michael Kim

469-222-7675 | mhk150230@g.ucla.edu | 10944 Strathmore Drive, Los Angeles, CA 90024
https://mhk150230.github.io/Michael-Kim-Bio/

EDUCATION

University of California, Los Angeles Los Angeles, CA

M.S: Electrical and Computer Engineering (Expected Graduation: Fall 2020) 2019-Current

- Area of Focus: Embedded Systems and Circuits

University of Texas at Dallas Richardson, TX

Undergraduate: Biomedical Engineering (Fall 2015 – Spring 2019) Major GPA: 3.83

- Recipient of AES (tuition-free education); Dean's List

Skills: C (Strong), C++, Energia, Arduino, MATLAB (Strong), Java (Strong), Python (Strong); Electrical Circuitry (soldering, PCB, etc.); Microsoft software and CAD programs (SolidWorks); Verilog; HTML/CSS; Android Studios; Machine Learning (TensorFlow/TensorFlowLite)

Relevant Courses: Human Computer Interaction (Machine Learning), Embedded Systems, Computer Science 1 & 2, Digital Circuits, Advanced Computation for Engineers, Digital Circuits, Signals and Systems, Components and System Design, Feedback Systems, Electric and Electronic Circuits

Will be Taking: Large Scale Data Mining (Models and Algorithms); Digital Image Processing; Security and Privacy for IoT, Cyber-Physical Systems, Embedded Systems

WORK EXPERIENCE

Texas Scottish Rite Hospital for Children Richardson, TX

Biomedical Engineer August 2018 – June 2019

- Worked with a team of biomedical engineers and to develop a prototype of a mobile playground sensor to monitor the activity of children for recovery and research purposes
- Device consists of attachments at the wrist and ankle to measure heart rate, location, and acceleration data; data is stored and processed externally; wireless communication between anchors and ultra-wideband chips were required for real-time data entry; 3D printed models from SolidWorks were utilized as the shell for the devices
- Matlab post-processing program with GUI and Arduino-based mobile and real-time data-loggers

University of California, Los Angeles Los Angeles, CA

Teaching Assistant for Mathematics for Life Scientists December 2019 – March 2020

- Assist in the delivery of a Mathematics course at UCLA such as leading discussions, developing course materials, preparing exams, and working closely with the professor to create a lesson plan

PROJECTS:

University of California, Los Angeles Los Angeles, CA

EMG-based Virtual Keyboard with Machine Learning September 2019 – December 2019

- Developed an EMG-based application to recognize hand and finger gestures, allowing for a wireless, touchless experience to enter text and control personal devices and IoT; Artificial Neural Network with sigmoid activation and softmax
- Python; Android Studios; TensorFlow/TensorFlowLite

Image-Classification App for Nutritional Contents of Food September 2019 - December 2019

- Phone application with compressed network (InceptionNet) to identify the elements in a food pic and output the calories, protein, etc. of a meal; TensorFlowLite with Android Studios application
- The application supplements image input with user's dietary restrictions to create a personalized output with potentially hazardous ingredients the meal might pose to the user