
QUALIFICATIONS PROFILE

- **Electrical Engineering:** Specialize in digital circuit design, digital signal processing, data mining and machine learning.
-

EDUCATIONAL BACKGROUND

B. S., Department of Electrical Engineering • NATIONAL CHIAO TUNG UNIVERSITY, Hsinchu, Taiwan 06/2017

- Independent Study Projects
 1. **Customize Acceleration Circuit for NanoJPEG Decoding Implemented on the Zedboard**
 2. Data-mining and analysis of **PM 2.5 (Air pollution measurement)**
-

PROFESSIONAL EXPERIENCE

Mobile Broadband Wireless Communication LAB, National Chiao-Tung University, Taiwan

Part-time researcher 09/2015 ~ PRESENT

- Research of 802.11ac and development of next-generation (5G) Wi-Fi router
- Areas of responsibilities:
 - System Structure Conceptualization
 - Hardware Study
 - Software Performance Optimization

High Speed Electronics LAB, UCLA

Summer Study Program Intern 07/2015 ~ 08/2015

- Conducted research on digital circuit and used FPGA board to design circuit outputting video signal to monitors
- Wrote driver language (c code) to initialize circuit, and wrote algorithm to optimize circuit performance

INSTITUTE FOR INFORMATION INDUSTRY Co. LTD, Taipei, Taiwan

Summer Intern 08/2014-09/2014

- Invited by Prof. Russell Hsing for summer intern position
- Developed SDN Switch automation measurement and analysis platform, which automatically measure and generate reports

INTELLIGENT SYSTEM CONTROL ROBOT PROJECT

Part-time researcher 02/2014-06/2014

- Designed a robot with image sensor, distance detection sensor and control unit based on the KNR platform

QUADCOPTER PROJECT

Part-time researcher 10/2013-04/2014

- Joined a team to build a remote-controlled Quadcopter, and in charge of software development and testing. The remote-controlled Quadcopter had mounted camera, and was made with off-the-shelf electric parts and components, with body made from 3D printing method.

PROFESSIONAL SKILLS

| | |
|-------------------------|---|
| <i>Applications:</i> | C, C++, Python, JAVA, Swift, Verilog and Matlab. |
| <i>Instrumentation:</i> | Analysis Instruments: oscilloscope, Multimeter, Power Supply, Signal Generator, FPGA, Logic Analyzer, EDA TOOL, Hspice, Modelsim, Hardware Design: FPGA, Logic Analyzer, EDA TOOL, Hspice, Modelsim, Xilinx ISE Design Suite, Xilinx Vivado. |

ACADEMIC ACTIVITY

Poster Presentation:

- *“Making Digital Circuit Logic Design using FPGA to output image to monitor”*, at UCLA, USA, 8/2015.
- *“MOOC Performance Prediction via Clickstream Data by Using Input-Feedback Time Series Neural Network”*, at Princeton University, USA, 10/2016.

EXTRACURRICULAR ACTIVITY

- **Co-founded a start-up of electronic locks solution, with classmates, mentors** and funders
9/2016~present
- **Member of Self-Made Society**
9/2013~9/2014

PUBLICATION LIST

| No. | Author / Topic / Pages | Date of Publication |
|------------|---|------------------------------------|
| 1 | Tsung-Yen Yang, Christopher G. Brinton, Member, IEEE and Carlee Joe-Wong Member, IEEE <i>“MOOC Performance Prediction via Clickstream Data by Using Input-Feedback Time Series Neural Network”</i> IEEE Journal of Selected Topics in Signal Processing - Special Issue on Signal Processing and Machine Learning for Education and Human Learning at Scale | 2016/10/15 (Data of submission) |