Shen-Fong Hung

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EDUCATION

University of Southern California CA., U.S.A.
M.S., Computer Science Sep 2018 – (Expected) Jun 2020
- Awards: The Xinran Ji Memorial Scholarship

National Chiao Tung University (NCTU) Hsinchu, Taiwan
M.S., Communications Engineering Sep 2016 – Jun 2017
- Overall GPA: 4.00/4.00
- Thesis: Joint Wireless Charging and Hybrid Power based Resource Allocation for Energy-Efficient Small Cells Networks

B.S., Electrical and Computer Engineering Sep 2012 – Jun 2016
- Ranking: 1/44; Overall GPA: 3.97/4.00; Major GPA: 4.00/4.00

WORK EXPERIENCE

Umbo Computer Vision Inc. Taipei, Taiwan
Software Quality Assurance Intern Jul 2017 - Oct 2017
- Designed test plans and test cases
- Designed automatic testing flowchart and implemented testing script using Python, Selenium, MongoDB under Unix
- Reviewed product interfaces, functionalities and reported the testing results

Mobile Intelligent Network Technology Laboratory (NCTU) Hsinchu, Taiwan
Research Assistant, supervised by Prof. Kai-Ten Feng Sep 2015 – Jul 2017
- Researched green communications technologies for 4G/5G wireless networks
- Designed MAC layer resource allocation algorithm by using non-linear fractional programming and dual decomposition
- Implemented proposed algorithms and software simulations using MATLAB

IMEC Taiwan Hsinchu, Taiwan
Summer Intern Jul 2015 – Aug 2015
- Implemented smart watch communication protocol I2C using C
- Ported smart watch sensors drivers to MCU framework using C

Freelance Web Developer Taiwan
Part time web developer Jan 2015 – May 2015
- Built website framework using Wordpress, and modified website layout and functionality to follow website designers' design using HTML, CSS, PHP, and Wordpress plugin
- Works: The Glenlivet Taiwan's official website (http://www.theglenlivet.com.tw) and Aberlour Taiwan's official website (http://www.aberlour.com.tw/home.html)

TECHNICAL SKILLS

- **Programming Languages:** C/C++, Java, Python, MATLAB, HTML, CSS, JavaScript, Bash
- **Operating Systems:** Linux(Ubuntu), Windows, Mac OSX
- **Mobile:** Android Studio(Java)
- **Databases:** MySQL, MongoDB
- **Computer Networks:** TCP/IP, L2/L3 Networking Protocols, LTE/5G Wireless Technology, Wireshark
- **Others:** Git, TensorFlow, scikit-learn, Bootstrap, Wordpress, OpenGL

SELECTED PROJECTS

Wireless Power Transfer and Energy Harvesting Applications for Small Cells Networks [MATLAB, Optimization Theory, Wireless Communications]

- Designed MAC layer resource allocation algorithms for green powered small cells and wireless charging system
- Enhanced 15% energy efficiency compared to traditional LTE-A networks
- Publication:
  Shen-Fong Hung, Pei-Rong Li, Kai-Ten Feng, and Yu-Tse Lin, "Joint Wireless Charging and Hybrid Power based Resource Allocation for LTE-A Wireless Network," in *Proceedings of IEEE Wireless Communication and Networking Conference (WCNC 2017)*, San Francisco, CA, Mar 2017.

Augmented Reality [C++, OpenGL, OpenNI]

- Constructed human skeleton's position based on human depth information provided by Kinect sensor
- Designed and built an interactive application that people can interact with the virtual object

TravelMap Android App [Android, Java, PHP, MySQL]

- Built a travel App that can let users search their nearby tourist attractions
- Implemented Android backend using PHP and MySQL database

Group Manager Android App [Android, Java]

- Built a multiusers managing platform for group members managing their projects and progress
- Implemented a multi-threaded server for multiple clients' service using Java

RELATED COURSEWORK

Computer Science:

Operating Systems (A+), Introduction to Database Systems (A+), Data Structures and Algorithms (A+), Computer Organization (A+), Intelligent Data Analysis (Machine Learning) (A+), Java Programming (A+), Object-Oriented Programming (A+), Optimization Theory and Application (A+), Creative Software Project (Android Programming) (A), Linear Algebra (A), Introduction to Computers and Programming (A)

Computer Networks:

Advanced Communication System Simulations (A+), Introduction to Computer Networks (A+), Communication Systems (A+), Data Communications (A+), Digital Communications (A+), Digital Signal Processing (A+), Mobile Communication (A+), 3GPP Mobile Communications (A+), Stochastic Process (A), Queuing Theory (A)