

# Hsiao-Yun (Katie) Tseng

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**Objective:** seeking a software engineering or research internship

## Professional Summary

- Proficient in **C/C++ in Linux environment**; familiar with **Python/Java/MySQL/Matlab/PHP/HTML**
- 3+ years of experience in **C/C++ programming** in **embedded Linux** as a **4G LTE** protocol software engineer
- 1+ year of experience in **website/database** development using **PHP, HTML, JavaScript, and MySQL**

## Education

**Ph.D., Computer Science, University of California, Los Angeles** **Expected 2015 - 2019**

- **GPA: 3.80/4.00**; course work: **Cloud Computing, Advanced Computer Networks, Large-Scale Data Mining**
- Completed all course requirements and written qualification; expect to become a PhD candidate in Fall 2017
- **Research topic:** Distributed computation over **information-centric network (ICN)**; **advisor: Mani Srivastava**

**M.S., Computer Science and Information Engineering, National Taiwan University** **2009 - 2011**

- **GPA: 4.00/4.00**; course work: **Machine Learning, Video Coding**, Information Theory, Multimedia Security
- **Thesis:** Distributed video coding with compressed sensing (published in a top-tier conference: ACM MM)

**B.S., Computer Science, National Chiao Tung University** **2005 - 2009**

- **GPA: 3.86/4.00**; course work: Object-Oriented Programming, Operating Systems, Computer Architecture

## Work Experience

**Software Engineer Intern (PhD), Facebook, Boston** **June 2017 – Sep. 2017**

- Worked as a software engineer in the indoor location team, completed a PhD-level project with **python** and **HiveQL**; **significant lines: 8,988**; libraries used: **scikit-learn** and **networkx**.
- Designed algorithms and build the application which generates WiFi maps using WiFi measurements collected from cell phones when less than 5% of the data has geo-information; accuracy: about 5 meter.

**Technical Intern, Synopsys Inc., Mountain View** **June 2016 – Sep. 2016**

- Worked as a software engineer in emulator team; **developed APIs using C/C++ in Linux** for Synopsys ZeBu Server-3 (SoC verification system) to estimate power consumption of programs/instructions (in production)

**Protocol Software Engineer, MediaTek Inc., Taiwan** **May 2012 – Sep. 2015**

- Worked on **LTE Layer 2 (MAC/RLC) protocol software using C/C++ in embedded Linux**; my codes are on smartphones released by *LG, Sony, Nokia, Amazon, Xiaomi, Lenovo, Huawei, ZTE, HTC*, etc.
- **On site debugging** during field test; improve the LTE data transmission of dual-SIM phones by 20%
- Developed an automated testing **Android App** that interprets and executes test scripts (TTL scripts); this App **found 361 protocol software defects** in the first year, and is now is **used by all test teams** in the company

**Software Engineer, IBM, Taiwan** **Aug. 2011 - April 2012**

- Responsible for developing and maintenance firmware of IBM's x86 servers (System X and BladeCenter)

## Selected Academic Projects

- Build a secure computation service that supports **Intel SGX** over software-defined **Name Data Network** with Redis server and **Docker containers** running on PCs; submitted a first-author paper to a conference (2017)
- Built a simulation system for **Voice over LTE** and **network function virtualization (NFV)** on **OpenStack** (2016)

## Publication

- Muhammad Taqi Raza, **Hsiao-Yun Tseng**, et al. "Uninterruptible IMS: Maintaining Users Access during Faults in Virtualized IP Multimedia Subsystem" (*To appear* in International Conference on Modeling, Analysis and Simulation of Wireless and Mobile Systems. ACM, 2017.)
- Bo-Jhang Ho, Renju Liu, **Hsiao-Yun Tseng**, and Mani Srivastava. "MyoBuddy: Detecting Barbell Weight Using Electromyogram Sensors." Proceedings of the 1st Workshop on Digital Biomarkers. ACM, 2017.
- **Tseng, Hsiao-Yun**, Yun-Chung Shen, and Ja-Ling Wu. "Distributed video coding with compressive measurements." Proceedings of the 19th **ACM international conference on Multimedia**. ACM, 2011.
- Yu-Ting Chen, Yi-Ting Cheng, Pei-Shiuan Ho, **Hsiao-Yun Tseng**. "Method of selecting an active SIM from multiple SIMs and a wireless device utilizing the same." **Patent, US 14/183,652, CN 201410184233**