Shih-Yuan Yu

+886-915-332-210 | r01922040@ntu.edu.tw
3Fl., No.5-2, Aly. 25, Ln. 10, Baojian Rd., New Taipei City, Taiwan

EDUCATION

National Taiwan University, Taipei, Taiwan *Sept. 2012-June 2014*
M.S. in Computer Science and Information Engineering (GPA: 3.83/4.00)
Thesis: "Energy Aware Service Matchmaking in IoT Systems"

National Taiwan University, Taipei, Taiwan *Sept. 2008-June 2012*
B.S. in Computer Science and Information Engineering (GPA: 3.74/4.00)

RESEARCH PROJECT

1. Intelligent Self-Reconfigurable Middleware for new M2M programming paradigm – WuKong Project

- Polished flow-based program (FBP) editor and constructed scenario for Smart House application demonstration.
- Enhanced and supported the context and proactivity features
  - Invented co-location transformation scheme to formulate and resolve service mapping problem
  - Constructed Java-based Simulation Platform(WuKongMapper) to evaluate algorithm performance
- Research was accepted by Conference MEDES2014 and awarded as **Best Paper Award**; by Journal JIDES2014 for mathematical and theoretical portion; and by Conference iThings2014 and was given an oral **presentation** in Taipei.

2. Persuasive System Design – "Sweet Building Greeter" and "Sweetfeedback"

- Sweetfeedback - A desktop sensor/effector platform for Persuasive Computing
  - Constructed client-side by Arduino/Processing.org, built server-side by Python-Flask
  - A research paper from this project was accepted by AAAI/SSS'13 as WIP (work-in-process).
- Sweet Building Greeter - A Demonstration of Persuasive Computing Design on Public Space
  - Designed the interaction workflow and deployed the systems for pilot study on CMUSV/ NTU CSIE
  - Research was accepted by HCI International 2015 and given an oral **presentation** in Los Angeles.

RESEARCH INTERESTS

Artificial Intelligence, Machine-to-Machine System Design, Intelligent System, Embedded System Design, Machine Learning, Human Computer Interaction, Persuasive Design.

PUBLICATION

Journal Paper

- Huang, Z., Lin, K. J., **Yu, S. Y.**, & Hsu, J. Y. J. (2014). Co-locating services in IoT systems to minimize the communication energy cost. Journal of Innovation in Digital Ecosystems, 1(1), 47-57.

Conference Paper

- Selker, T., **Yu, S. Y**., Liang, C. W., & Hsu, J. (2015). SweetBuildingGreeter: A Demonstration of Persuasive Technology for Public Space. In International Conference on Universal Access in Human-Computer Interaction (pp. 475-486). Springer, Cham.
- Huang, Z., Lin, K. J., **Yu, S. Y.**, & Hsu, J. Y. J. (2014). Building energy efficient internet of things by co-locating services to minimize communication. In Proceedings of the 6th International Conference on Management of Emergent Digital EcoSystems (pp. 101-108). ACM.

- **Yu, S. Y.**, Shih, C. S., Hsu, J. Y. J., Huang, Z., & Lin, K. J. (2014). QoS oriented sensor selection in iot system. In Internet of Things (iThings), 2014 IEEE International Conference, and Green Computing and Communications (GreenCom), IEEE and Cyber, Physical and Social Computing (CPSCom), IEEE (pp. 201-206). IEEE.
- Huang, Y. C., Wang, C. I., **Yu, S. Y.**, & Hsu, Y. J. (2013). In-HIT Example-Guided Annotation Aid for Crowdsourcing UI Components. In First AAAI Conference on Human Computation and Crowdsourcing.
- Huang, Y. C., Tsai, B. L., Wang, C. I., **Yu, S. Y.**, Liang, C. W., Hsu, J. Y. J., & Selker, T. (2013). Leveraging Persuasive Feedback Mechanism for Problem Solving. In AAAI Spring Symposium: Shikakeology.

WORK EXPERIENCE

1. Software Engineer in Mediatek, HsinChu, Taiwan *Nov. 2014-Present*

- Lead the Modem System L1 Software Hard-Real Time (HRT) Task Force
  - Profile system HRT performance / debug system HRT issues
  - Coordinate teams of modem software owners to discuss and overcome HRT issues
  - Construct tools and warning system to facilitate system HRT performance verification
  - Achieve optimization for modem product in the aspect of idle rate, power, and EMI bandwidth
- Design Modem Dynamic Voltage & Frequency Scaling (DVFS) Control Driver
- Design Stress Test Scheme to reduce manpower in stage of DVFS driver verification
- Design/ Implement Modem L1 RF center control scheduling driver
- Design next-generation DVFS control scheme through analyzing Modem behavior by ML/DL tool
- Maintain and Debug GSM L1/LTE L1/Low-Power Sleep Control Driver

2. Exchange Research Assistant at Carnegie Mellon University Silicon Valley *July-Sept. of 2012/2013*

3. Tech Lead in OpenHCI 2013 Workshop *May–July 2013*

- Designed course plan and taught the programming course for Arduino/Processing.org

4. Android App developer, 31 Corp., Taipei, Taiwan *Sept.2011- Sept.2013*

- Developed and maintained Android front-end application of IM application 31SMS

AWARD

vAwards awarded by Mediatek Inc. for 7 times *Oct/Nov/Dec 2015, Dec 2016, Jan/May/Nov/Dec 2017*
MEDES2014 Best Paper Award *Sept. 2014*
CMUSV Semester Final Showcase Best Demonstration Award *July 2012*
National Taiwan University Presidential Award (7/129) *Spring 2009*

SKILLS

Programming Language: C/C++, Java, Python (Selenium, Django, Flask, TensorFlow)
Language: Mandarin (native); Taiwanese (intermediate); Japanese (beginner); English (fluent)—TOEFL 95(R27/L24/S20/W24), GRE 320 (V150/Q170), AWA: 3.5 (06/17/2017)