Ping-Chia (Amber) Tsai

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EDUCATION

University of Washington, Seattle WA   September 2014 – June 2019 (Expected)

Ph.D. in Electrical Engineering

University of Washington, Seattle WA   September 2014 – March 2016

M.S. in Electrical Engineering

- GPA: Overall 3.83/4.0
- Coursework: Machine Learning, Microcomputer Systems, Systems Programming, Artificial Intelligence for Engineer, Advanced Topics in Control System, Probability and Random Processes, Introduction to Synthetic Biology, Lab Methods in Synthetic Biology

National Taiwan University (NTU), Taipei, Taiwan   September 2010 – June 2014

B.S. in Electrical Engineering

- GPA: Overall 3.81/4.0; Major 3.86/4.0
- Coursework: Data Structure and Programming, Introduction to Computer Networks, The design and Analysis of Algorithms*, Mobile Phone Programming*, Advanced Statistics (I)*, Advanced Statistics (II)*, Advanced Digital Signal Processing*   (*): Graduate-level courses

SKILLS

Programming Proficiencies: C/C++, Python, Matlab, Objective-C, Ruby on Rails, HTML/CSS/JavaScript

Tools: Github, Heroku, Last.fm API, Node.js, MongoDB

HONORS & AWARDS

Grace Hopper Celebration (GHC) Scholarship Grant   July 2015

- Support women in computing for attending the GHC conference. The acceptance rate is 26 percent.

WORK EXPERIENCE

Developer Intern, Cardinal Blue, Taipei, Taiwan   September 2013 – June 2014

- Analyzed users' behavior of PicCollage, a photo app with over 60 million downloads, and visualized the data on a dashboard using Ruby on Rails

SELECTED PROJECTS

UW EcoCar Infotainment Center   November 2015 – present

- Develop infotainment platform on a touchscreen for vehicles to communicate with hardware and cloud services
- Write Python programs that communicate with cloud services to deliver driving statistics

Job Salary Prediction (Machine Learning)   Fall 2015

- Applied feature selection and linear regression methods to predicting job salary from job ads in Python using dataset provided by the 2013 Kaggle Competition
- Used NLP keyword extraction tool to process the full text of job ads

Satellite Management and Control System (Microcomputer Systems)   Summer 2015

- Used C language to develop an embedded system based on a real-time operating system with the Stellaris system
- Utilized APIs to access hardware in order to collect and process the data from sensors, control the peripherals such as GPIO, and make bidirectional remote communication via a simple web server and network interface

Software Tools Development for Aquarium, Klavins Lab, University of Washington   Fall 2014 – present

- Use JavaScript and Python to build petri net GUI and scheduling function for Aquarium, a software for helping reproduce experimental results in synthetic biology by representing wetlab protocols as computer language and keeping track on the processes

Music Recommendation Based on Artist Novelty and Similarity, MPAC Lab, NTU   Fall 2013 – Fall 2014

- Developed a novelty-based music recommendation system which provides novel and fond music to users
- The proposed system was evaluated by 106 subjects and achieves high performance
- Publication: *2014 IEEE International Workshop on Multimedia Signal Processing (MMSP).*

Mind Map (Mobile Phone Programming)   Fall 2013

- An iOS app by which participants can record and organize their thoughts or flow of minds during brainstorming
- Learned the basic knowledge on human-computer interaction and how to create a mobile phone app