Ming-Chang Chiu

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EDUCATION

University of Southern California (USC), Los Angeles, California, USA
Master (M.S.) in Electrical Engineering — Aug 2016 – May 2018 (Expected)

National Tsing Hua University (NTHU), Hsinchu, Taiwan
Bachelor of Science (B.S.) in Electrical Engineering & Computer Science — Sep 2011 – Jun 2015
- Selected as the only honorary member of Phi Tau Phi Scholastic Society in the department
- Last 60 GPA: 4.05 / 4.30 Cumulative GPA: 3.82 / 4.30 (Excluding credits at University of Minnesota)

University of Minnesota, Twin-Cities, Minnesota, USA
Exchange Student in Computer Science and Engineering — Sep 2014 – Dec 2014
- Introduction to Intelligent Robotics (A) Advanced Programming Principles (A)
- Cumulative GPA: 4.0 / 4.0, 15 credits

Tsinghua University, Beijing, China
Summer Exchange Student in Computer Science — Aug 2012 – Sep 2012

SKILLS

C/C++, MATLAB, Ocaml, Java, Python, Hadoop, HTML, PHP, Javascript, LaTeX, Spark, AWS, MySQL, Scala, R

RESEARCH PROJECTS

The World is Changing: Finding Changes on the Street — Feb 2015 – Sep 2015
- Constructed image change detection model, successfully detected street view mismatches in Dash camera images with respect to Google Street View (GFV)
- Applied RANSAC to re-outline the areas of mismatches in the original GFV images with accuracy outperforming baseline by 46%
- Devised a reusable manual labeling software and data types that recorded ground truth mismatch areas

Re-scheduling Computing Job on Large-Scale System — Jul 2013 – Aug 2014
- Applied Hadoop benchmark (HiBench) to test performance of processing different types of computing job on scalable distributed system
- Analyzed and found suitable disk for certain computing job types
- Applied machine learning algorithm on Linux resource usage to discern types of computing and then moved the data to either Hard Disk or Solid-State Disk to proceed

ACADEMIC PROJECTS

Movie Recommender — Mar 2015 – Jun 2015
- Implemented 3 common recommendation methods and utilized MovieLens database to recommend movies
- System built on Amazon AWS platform which enables recommender to process huge dataset in a short time

Basic Dictionary Search Engine — Feb 2015 – Apr 2015
- Implemented PageRank algorithm to construct a search engine which prioritizes the related links given a keyword
- Coded under scalable MapReduce framework on 8-node distributed computers having storage/retrieval functions

Autonomous Robotic Convoy System Design — Oct 2014 – Dec 2014
- Proposed an algorithm that allows rovers to recognize only one moving object without getting distracted
- Utilized ultrasonic sensor to detect object distances and devised a paradigm to discern the original moving object

Remote Control Car — Apr 2014 – Jun 2014
- Circuit design connecting motors, batteries, and embedded controller
- Developed a Smart Phone application using Bluetooth Low Energy to remotely control a toy car

Midnight Radio: A Shared Online Radio Platform — Apr 2014 – Jun 2014
- Developed front-end web pages including user/administrator portal, chatting room, music list, etc.
- Built back-end user upload system, administrator supervision function, and music information database

One-on-one Chinese Chess Game — Aug 2012 – Sep 2012
- Designed graphical user interface and implemented the rules of the game with Qt (C++)
- Applied Internet Programming so people can connect through Internet to play

PROFESSIONAL EXPERIENCE

Broadsound Corporation, Jupei City, Hsinchu, Taiwan. — Jul 2013 – Sep 2013
Intern
- Completed full-stack production process of a Wind Gauge, including product design, system analysis, assembling, calibrating, testing, and exporting
- Developed part of their all-in-one ProCheck software (including probe calibration, testing, and data collection) which became a major revenue source
- Final profit generation: About $100K

PUBLICATIONS

K.-T. Chen, M.-C. Chiu, F.-E. Wang, J.-T. Lin, F.-H. Chan, Min Sun, "The World is Changing: Finding Changes on the Street," submitted to *Asian Conference on Computer Vision (ACCV) 2016*