# 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 one 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, HTML, PHP, Javascript, LaTeX, AWS, 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 type
  - Applied machine learning algorithm on Linux resource usage to discern types of computing and then movie the data to appropriate disk to proceed, either on Hard Disk or Solid-State Disk

**APPLICATION 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 to process millions of data 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 makes 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

**Shardio: A Shared Online Radio Platform**                    Apr 2014 – Jun 2014
  - Developed front-end web pages that contains fancy 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 realized the rules of the game with Qt (C++)
  - Applied Internet Programming so people can connect through Internet to play.

**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*

**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
  - Involved in development of their all-in-one ProCheck software (including probe calibration, testing, and data collection) which became one of their major revenue source
  - Final profit generation: About $100K