Chang-Yi (Mike) Chen

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RESEARCH INTERESTS

Software Engineering, Artificial Intelligent, Social Network Analysis, Video Streaming

EDUCATION

Master of Science in Electrical Engineering,   *09/2014 – 07/2016*

Internet Research Lab, National Taiwan University
- Advisor: Prof. Wanjiun Liao and Prof. Cheng-Shang Chang
- Overall GPA: 3.86/4.3
- Thesis: Community Evolution Detection and Prediction in Online Social Network

Bachelor of Science in Electrical Engineering,   *09/2010 – 06/2014*

National Taiwan University
- Overall GPA: 3.87/4.3

RESEARCH EXPERIENCE

Community Evolution Detection and Prediction in Online Social Network   *09/2014 – 07/2016*
- Advisor: Prof. Wanjiun Liao, Prof. Cheng-Shang Chang
- We tried to track the community structures in several time slides in the social network, detect the communities' evolution, and even predict the evolution.
- Detection: We used Long-Term Evolution Method to detect the communities' evolution and verified the Long-Term Evolution Method with the synthetic data we generated.
- Prediction: Based on the evolution results detected by Long-Term Evolution Method, we select about 300 features of each community to train a model for community evolution prediction.
- Applied the prediction on Facebook and DBLP datasets We got the accuracy 81.74% in predicting communities' merging in DBLP dataset, better than existing prediction method.

Gathering the user's data from cellphone and analysis the result   *03/2013 – 06/2014*
- Tracked the user's experience of using cellphone for big data analysis. Created a background application of Android to catch the user's data, and store the data for later analysis.

WORK EXPERIENCE

Educational services at Jinshan Elementary School, New Taipei City   *08/2016 – present*

Network Admin at Internet Research Lab (iRLab), NTU   *09/2014 – 07/2016*
- Maintained the lab's website.
- Manage the router and Wi-Fi environment.

Summer Intern in FlySun Development Co. Ltd   *07/2015 – 09/2015*
- Worked on the project whose main goal is to build an E-learning system
- Developed the database with MongoDB with PHP.
- Used boostartap, jQuery and WebRCT to make a vocal-record website.

Assistant of Network Admin at Electrical Engineering Dept., NTU   *03/2014 – 02/2015*
- Fixed network problems.
- Designed an application called "Information Platform" to display news and information about the department such as the department's activities or the outstanding projects by students.
- Information Platform gathers the news, weather information, and other data from the internet; after parsing the xml or html data, it displays them on the screen. It also serves as the employee check in system.

SELECTED COURSES & TERM PROJECTS

Artificial Intelligent *09/2014 – 01/2015*

Term Project: AI of Connect-Four Game
- Built a Connect-Four Game AI.
- Reached 90% win rate according to the existing AI.

Theory of Computer Games *09/2014 – 01/2015*

Term Project: AI of 9x9 Go
- Developed a 9x9 Go AI with Monte Carlo tree search and board hashing.
- Beat the random AI which takes the move randomly all the time.

Term Project: AI of Chinese Chess
- Developed a Chinese Chess AI and challenged another students' AI.
- Lost only one set of the total 14 sets.

Networking and Multimedia Lab *03/2013 – 06/2013*

Term Project: Catch (An Android AR game)
- Created an Augmented Reality Android game.
- Used the Unity3D with the AR package Vuforia to build a AR crane machine game.

Term Project: GyroBattle (An Android movement game)
- Developed an Android movement game with gyroscope.
- Created a spinning top game controlled by the movement of the phones. It allows two users play at the same time through Wi-Fi Direct.
- Great synchronization. Two players can play the game at the same time without lag.

Term Project: LineShark (A chatroom application on desktop)
- Created a chatroom application with video chat function.
- Implemented the file-transfer function and sound effect when entering special text.
- Implemented video/audio chat function with VLC package.

Activities

The Beauty of Programming 2016 by Microsoft – Coding Contest *24/04/2016*
- Qualified for the semi-final round.

Facebook X Girls in Tech Hack For A Cause 2015 *14/11/2015*
- Built an application called "smartguard" which can keep user from danger.
- This application extracts the information about the danger level of each location, parses the data and stores in the server.
- The application can get the GPS information for detecting the user's location and worn the user if he/she is near the dangerous zone. It records the sound when the user is in the dangerous zone.
- By keep asking the user to enter the password every 5 minutes, the application can ensure the user's safety, and call the Police automatically if the user fail to enter the password.

The First Big Data Analytics for Semiconductor Manufacturing Contest by TSMC *04/10/2014*
- Qualified for the semi-final round.

Skills

Programming Languages:	C/C++, Java, Python, JavaScript, PHP, C#, Swift
Programming Skills:	AI, socket programming, memory management, Android app development, iOS app development, setting up media streaming server
Tools:	Unity 3D, R, MongoDB, MySQL, Bootstrap, NodeJS, SAS
Package:	iGraph, scikit-learn, nginx-rtmp-module, libSVM