HUNG-CHEN (HANK) CHEN

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RESEARCH INTERESTS

Natural Language Processing, Machine Learning, Artificial Intelligence

EDUCATION

University of Southern California, LA, CA, USA   *Jan 2018 - Present*

- Master of Science in Computer Science

National Chengchi University, Taipei, Taiwan   *Sep 2010 - Jun 2014*

- Bachelor of Science in Computer Science
- *Advised by Dr. Chao-Lin Liu*
- Related Courses (*graduate-level courses): Information Retrieval* (99/100); Web Search and Mining* (90/100); Introduction to Artificial Intelligence (91/100); Computer Network (93/100); Mobile Communication Systems (91/100); Mobile Application Development (94/ 100); Database System (89/100)

HONORS

Presidential Award - rank top 2/34 in class   *2013 spring, 2013 fall, 2014 spring*

PUBLICATIONS

Conference Publications

[1] **Hung-Chen Chen**, Zi-Yuan Chen, Sin-Yi Huang, Lun-Wei Ku, Yu-Shian Chiu and Wei-Jen Yang. "Relation Extraction in Knowledge Base Question Answering: from General Domain to Catering Industry", *The 20th International Conference on Human-Computer Interaction (HCII)*, 2018.

[2] Chieh-Yang Huang, Tristan Labetoulle, Ting-Hao Huang, Yi-Pei Chen, **Hung-Chen Chen**, Vallari Srivastava and Lun-Wei Ku. "MoodSwipe: A Soft Keyboard that Suggests Message Based on User-Specified Emotions", *Conference on Empirical Methods in Natural Language Processing (EMNLP)(Demo Session)*, 2017.

Workshop Publications

[3] Wei-Chug Wang, **Hung-Chen Chen**, Lun-Wei-Ku, Zhi-Kai Ji, Hui-I Hsiao and Yu-Shian Chiu. "Whose Nickname is This? Recognizing Politicians from Their Aliases", *The 2nd Workshop on Noisy User-generated Text (W-NUT)*, 2016.

RESEARCH & WORK EXPERIENCES

Research Assistant, Academia Sinica, Taiwan   *May 2016 - Dec 2017*

- Researching in Natural Language Processing
- *Advisor: Dr. Lun-Wei Ku*

Question Answering over Knowledge Base   *May 2017 - Dec 2017*

- Used Dependency Parser and Name Entity Recognition to analyze natural language query
- Used Neural Network model to extract the most possible relation in KB for the question

Hypernym Detection   *May 2016 - Dec 2017*

- Used context information to identify hypernym relation between two nouns
- Extracted sentences from WikiCorpus as context information
- Used Convolutional Neural Network to train a classifier

Whose nickname is this?   *Aug 2016 - Oct 2016*

- Used Hidden Markov Model to recognize Taiwanese politician from their aliases

- Successfully analyzed how the aliases formed and utilized it on Hidden Markov Model
- Achieved accuracy around 80

Alternative Military Service, Aviation Police Bureau, Taiwan *Nov 2014 - Nov 2015*

- Helped to solve software and hardware problems within the department
- Designed the program to help investigate criminals
- Helped to build a system to keep and make statistical record of lost items in the Lost and Found Center in the Taoyuan International Airport

Projects

Predicting Excitement at DonorsChoose.org (Web Search and Mining) *Feb 2014 - Jun 2014*

- Identified the projects that are exceptionally exciting to the business
- Used stop words, stemmer and tf-idf to process the essay
- Extracted features from statistical data, such as school and poverty level
- Used Support Vector Machine (SVM) as learning as supervised learning model

Probabilistic Information Retrieval Model (Web Search and Mining) *Feb 2014 - Jun 2014*

- Used Okapi BM25 as scoring function to build an information retrieval model
- Used Lemur tool to create inverted index and to extract the information from inverted index

Course Selection Database System (Database System) *Feb 2014 - Jun 2014*

- Implementation of database normalization to optimize database system
- Used MySQL to build the database system

Vector Space Information Retrieval Model (Information Retrieval) *Sep 2013 - Jan 2014*

- Treated each document and query as vector to build an information retrieval model

9X9 Multiplication Game (Special Topics on Computer Science) *Feb 2013 - Jan 2014*

- Built an Android app to help children learn multiplication

Tracking Clock (Mobile Application Development) *Feb 2013 - Jun 2013*

- Created an iOS app to track the location of the members in the group

Leadership Experience

Principal of trumpet section - NCCU Wind Band *Jul 2012 - Jan 2013*

- Excellence Award - with 2nd place in National Wind Band Competition 2013, 2014

Officer of the activities department - NCCU CS Student Association *Sep 2011 - Jun 2012*

Skills

Toolbox/Software	PyTorch, Keras, CUDA, Latex
Programming Languages	C, C++, Python, Java, SQL