Joseph Chang

Curriculum Vitae

CS Dept., NTHU,
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Education

2010–2012 **M.S., Computer Science**, *National Tsing Hua University*.
Research focused on Natural Language Processing and Information Retrieval, including cross-lingual information retrieval and extraction, grammatical error correction, machine translation, Wikipedia, Google Web1T, and Hadoop MapReduce programming.

2006–2010 **B.S., Computer Science**, *Yuan Ze University*, *GPA 3.6*.
Joined EDA Lab and studied FPGA architectures, FPGA technology mapping, and design partitioning for 3D IC.

Languages

Chinese **Native**

English **Fluent** *ETS TOEFL-iBT: 115 (R:29, L:29, S:29, W:28) out of 120*

Work Experience

April–June **Freelance Developer**, *OpenMoko Inc.*.
2012 Developed a highly complex Android client application of the social network website www.bitmarq.com for OpenMoko, the startup company that initiated the Openmoko Project to create open source mobile phones in 2007.

2010–2011 **Research Assistant**, *Academia Sinica*.
Developed an Expectation-Maximization based method for cross-lingual ontology mapping, from EHowNet to the Princeton WordNet. The algorithm was implemented on the Hadoop MapReduce platform for efficiency.

May–Sept. **Software Engineer Intern**, *0xlab Inc.*.
2010 Developed in C and Java the open source Android benchmarking platform 0xBench and server-side visualization hosted on Google App Engine. 0xBench is now being used by major companies worldwide and ships with Texas Instrument's development boards. 0xlab is a startup company founded by enthusiastic developers who actively contribute to various open source projects including the Android Open Source Project.
- project page: http://code.google.com/p/0xbench/
- android app: https://play.google.com/store/apps/details?id=org.zeroxlab.zeroxbenchmark
- server-side: http://0xbenchmark.appspot.com

2007–2012 **Cluster Administrator**, *National Tsing Hua University*.
In charge of Hadoop cluster administration (hadoop.nlpweb.org) and MapReduce programming training.

Publications

Conference Papers (oral)

Joseph Chang, Richard Tzong-Han Tsai, and Jason S. Chang. WikiSense: Supersense tagging of Wikipedia named entities based WordNet. In *Proceedings of the 23rd Pacific Asia Conference on Language, Information and Computation*, pages 72–81, Hong Kong, December 2009.

Joseph Chang, Tzu-Hsi Yen, and Richard Tzong-Han Tsai. Minimally supervised question classification and answering based on WordNet and Wikipedia. In *Proceedings of the 21st Conference on Computational Linguistics and Speech Processing (ROCLING)*, Taiwan, August 2009. The Association for Computational Linguistics and Chinese Language Processing.

Joseph Z. Chang, Jason S. Chang, and Roger Jyh-Shing Jang. Learning to find translations and transliterations on the web. In *Proceedings of the 50th Annual Meeting of the Association for Computational Linguistics (ACL)*, pages 130–134, Jeju Island, Korea, July 2012. Association for Computational Linguistics.

Demo Papers

Joseph Z. Chang and Jason S. Chang. Word Root Finder: a morphological segmentor based on CRF. In *Proceedings of the 24th International Conference on Computational Linguistics (COLING)*, Mumbai, India, December 2012.

Task Papers

Joseph Chang, Shih-ting Huang, Ho-ching Yen, Ming-Jhuan Jiang, Chung-chi Huang, Jason S. Chang, and Ping-che Yang. PatentMT: Summary report of team III_CYUT_NTHU. December 2011.

Jian-Cheng Wu, Joseph Chang, Yi-Chun Chen, Shih-Ting Huang, Mei-Hua Chen, and Jason S. Chang. Helping Our Own: NTHU NLPLAB system description. In *Proceedings of the Seventh Workshop on Building Educational Applications Using NLP*, pages 295–301, Montreal, Canada, June 2012. North American Chapter of the Association for Computational Linguistics (NAACL).

Programming Skill

Python	**nltk, scipy, twisted and more**	*6 years*
Hadoop	**MapReduce programming**	*5 years*
Tools	**Moses, HMM, EM, CRF, ME, SVM, MEMM**	*4 years*
Java	**Android app development**	*3 years*
Objective-C	**iPhone app development**	*1 year*
Linux	**Desktop and server administration**	*8 years*
Cloud	**Google App Engine, Heroku**	*1 year*
C, C++, STL	**Electronic design automation and more**	*8 years*
Matlab	**Audio signal processing**	*1 year*

Selected Awards and Honors

Scholarships and Travel Grants.
○ The Association for Computational Linguistics and Chinese Language Processing
○ Department of Information System and Applications, National Tsing Hua University
○ Department of Computer Science and Engineering, National Yuan Ze University

Bronze Medal **National IC/CAD Programming Contest**, *Ministry of Education*.
Developed a 3D-IC partitioning algorithm, and implemented in 3000+ lines of C++/STL code. A total of 160 teams participated to compete on runtime and algorithm performance.

Second Place **The 11th Trend Micro Programming Contest**, *Trend Micro Inc.*.
Out of 67 teams that participated.

First Place **Fun Taipei Mobile App Contest**, *Taipei City Government*.
Developed *Taipei Fever*, a Taipei City tour guide app for iOS, Android, and WindowsPhone7. (http://taipei.zfever.tw)

Third Place **National Information Security Contest**, *Industrial Technology Research Institute*.
Out of 149 teams that participated.

Best Student Project **Mobile Hero UI Contest**, *Ministry of Economic Affair*.
Developed *Paper Piano*, an augmented reality virtual instrument for Android. (http://www.youtube.com/watch?v=kfnd2wnb1Ec)

Honorable Mention **Mobile App Development Contest**, *Chuang Hua Telecom*.
Developed *beFriend*, a business card management app for Android.

First Place **Undergraduate Research Paper Award**, *Yuan Ze University*.