

# Joseph Chang

## Curriculum Vitae

LTI, Carnegie Mellon University  
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### Education

- 2013–2015 **M.L.T., Computer Science**, *Carnegie Mellon University*.  
(exp.) Focus on **Human-Computer Interaction** and **Natural Language Processing**. Won course project competitions for *Algorithms for NLP* and *Language and Statistics*.
- 2010–2012 **M.S., Computer Science**, *National Tsing Hua University*, GPA 4.23/4.30.  
Focus on **Natural Language Processing** and **Machine Learning**. Published in tier-1 NLP conferences (ACL, NAACL, COLING)
- 2006–2010 **B.S., Computer Science**, *Yuan Ze University*, GPA 3.6/4.0.  
Special Project: IC design automation, specifically FPGA technology mapping.

### Selected Work Experience

- April–July 2013 **Search Engineer, Asia-Pacific (fulltime)**, *Yahoo Taiwan Inc.*  
Yahoo knowledge graph backend and data analysis. Including search log mining, database integration, and a web-based backstage interface. (Python, Hadoop, Search log analysis)
- 2009–2011 **Research Assistant**, *Academia Sinica*.  
Develop an distributed (Hadoop) Expectation-Maximization based algorithm for cross-lingual ontology mapping (EHowNet and WordNet).
- Fall 2012 **Teaching Assistant**, *Natural Language Processing*, National Tsing Hua University.  
Recitations and lab sessions.
- April–June 2012 **Contractor**, *OpenMoko Inc.*  
Developed an Android client for the social network <https://intelligencia.io>. (Java, Android)
- May–Sept. 2010 **Software Engineer Intern**, *Oxlab Inc.*  
Developed an open source Android benchmarking platform and server-side visualization called OxBench, which is used by major smartphone companies and developers worldwide, and ships with Texas Instrument's development boards. (C, Java, Android, Web)

### Selected Honors and Hackathon Awards

Please see my portfolio page for demo videos: <http://joseph.nlpweb.org/portfolio/>

- First Place **Fun Taipei Mobile App Contest**, *Taipei City Government*.  
Developed *Taipei Fever*, a Taipei City tour guide app for iOS, Android, and WindowsPhone7.
- 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. (rate: <10%)
- Best Student Project **Mobile Hero UI Contest**, *Ministry of Economic Affairs*.  
Developed *Paper Piano*, an augmented reality virtual instrument for Android.

- Second Place **The 11<sup>th</sup> Trend Micro Programming Contest**, *Trend Micro Inc.*.  
Out of 67 teams that participated.
- 8 Aug. 2011 **Presenter**, *Conference for Open Source Coders, Users and Promoters (COSCUP)*.  
Presented project 0xBench in one of the largest OSS conference in Asia. (attendance: 1200)
- Scholarship **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

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## Selected Publications

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. In *Patent Machine Translation Task at NTCIR-9*, Tokyo, Japan, December 2011. National Institute of Informatics, Japan.

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 (acceptance rate: 25%)*, pages 72–81, Hong Kong, China, December 2009.

Joseph Chang, Tzu-Hsi Yan, 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*, Taichung, Taiwan, August 2009. The Association for Computational Linguistics and Chinese Language Processing.

Joseph Chee Chang, Aniket Kittur, Nathan Hahn, and Andrew Peters. Alloy: Combining crowds and computation to extract concepts and categories. In *Submission to CHI'15*, 2014.

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 (acceptance rate: 20%)*, pages 130–134, Jeju Island, Korea, July 2012.

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).

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## Technical Keywords

- Intermediate **Ruby, Ruby on Rails, Objective-C/iOS**
- Proficient **Web Front-end & Back-end, Python, Hadoop, Java/Android, C/C++**
- Research **Natural Language Processing, Human-Computer Interaction, Machine Learning**