

# Joseph Chee Chang

## Curriculum Vitae

LTI, Carnegie Mellon University  
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### Education

- 2013–2018 **Ph.D, Computer Science**, *Carnegie Mellon University*.  
(exp.) Focus on **Human-Computer Interaction** and **Natural Language Processing**. Crowd-powered machine learning / Machine learning supported crowdsourcing. Won course project competitions for *Algorithms for NLP* and *Language and Statistics*.
- 2010–2012 **M.S., Computer Science**, *National Tsing Hua University*, GPA 4.2/4.3.  
Focus on **Natural Language Processing** and **Machine Learning**. Publications in top 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 **Search Engineer, Asia-Pacific**, *Yahoo Taiwan Inc.*  
2013 Fulltime. Yahoo knowledge graph backend and data analysis. Including search log mining, database integration, and a web-based backstage interface. (Hadoop Search log analysis)
- 2009–2011 **Research Assistant**, *Academia Sinica*.  
Develop an Expectation-Maximization based algorithm on Hadoop 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 **Contractor**, *OpenMoko Inc.*  
2012 Developed an Android client for the social network <https://intelligencia.io>. (Java, Android)
- May–Sept. **Software Engineer Intern**, *Oxlab Inc.*  
2010 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 WindowsPhone.
- Bronze Medal **National IC/CAD Programming Contest**, *Ministry of Education*.  
(<10%) Developed a 3D-IC partitioning algorithm implemented in 3000+ lines of C++/STL code. A total of 160 teams participated to compete on runtime and algorithm performance.
- Best Student **Mobile Hero UI Contest**, *Ministry of Economic Affairs*.  
Project 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.
- Presenter **Conference for Open Source Coders, Users and Promoters (COSCUP)**.  
Presented project 0xBench in the largest OSS conference in Asia. (attendance: 1200)
- Scholarships **Research Grants**.  
Co-authored the proposal for 2015 Google Faculty Research Award: Modeling and Augmenting Sensemaking and Exploratory Search (PI: Professor Aniket Kittur).
- Scholarships **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, 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, acceptance rate: 20%)*, Jeju Island, Korea, July 2012.

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%)*, Hong Kong, China, December 2009.

Joseph Chee Chang, Aniket Kittur, and Nathan Hahn. Alloy: Clustering with crowds and computation. In *Conference on Human Factors in Computing Systems (CHI, acceptance rate: 23%)*, 2016.

Nathan Hahn, Joseph Chee Chang, Ji Eun Kim, and Aniket Kittur. The knowledge accelerator: Big picture thinking in small pieces. In *Conference on Human Factors in Computing Systems (CHI, acceptance rate: 23%)*, 2016.

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*, Montreal, Canada, June 2012. North American Chapter of the Association for Computational Linguistics (NAACL).

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## Technical Keywords

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