

# Joseph Chee Chang

## Curriculum Vitae

LTI, Carnegie Mellon University  
5000 Forbes Ave, Pittsburgh, PA 15213  
☎ 650-877-2009  
✉ josephcc@cs.cmu.edu  
📁 joseph.nlpweb.org

### Education

- 2013–2018 **Ph.D, Computer Science, Carnegie Mellon University.**  
(exp.) Focus on **Human-Computer Interaction**: Sensemaking, Crowdsourcing, and Machine Learning. Won course project competitions for *Algorithms for NLP* and *Language and Statistics*. Advisor: Aniket Kittur.
- 2010–2012 **M.S., Computer Science, National Tsing Hua University.**  
Focus on **Natural Language Processing** and **Machine Learning**. Published in NLP conferences including ACL, NAACL, and COLING. Advisor: Roger Jang.
- 2006–2010 **B.S., Computer Science, Yuan Ze University.**  
Special Project: IC design automation, specifically FPGA technology mapping.

### Selected Work Experience

- April–July 2013 **Search Engineer, Asia-Pacific, Yahoo Taiwan Inc.**  
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 2012 **Software Engineer Contractor, OpenMoko Inc.**  
Developed an Android client for the social network <https://intelligencia.io>. (Java, Android)
- May–Sept. 2010 **Software Engineer Intern, Oxlabs 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 WindowsPhone.
- Bronze Medal ( $<10\%$ ) **National IC/CAD Programming Contest, Ministry of Education.**  
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 **Human-Computer Interaction, Natural Language Processing, Machine Learning**