

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**: 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 **Web Information Extraction**. Thesis work published in ACL 2012. Advisor: Roger Jang.
- 2006–2010 **B.S., Computer Science**, *Yuan Ze University*.
Special Project: IC design automation, specifically FPGA technology mapping.

Selected Work Experience

- May–August 2016 **PhD Research Intern**, *Microsoft Research*.
Worked on collaborative crowdsourcing for collecting training labels for complex datasets. To be published at ACM SIGCHI 2017.
- April–July 2013 **Search Engineer, Asia-Pacific**, *Yahoo Taiwan Inc*.
Fulltime. Yahoo knowledge graph backend and data analysis: search log mining (Hadoop), database integration, and web-based backstage interface.
- 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 (startup)*.
Developed the Android client for an online social network. (Java, Android)
- May–Sept. 2010 **Software Engineer Intern**, *0xlab Inc (startup)*.
Developed an open source Android benchmarking platform and server-side visualization called 0xBench, 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 Awards

- Research Grant **Google Faculty Research Award**, 2015.
Co-authored the proposal: *Modeling and Augmenting Sensemaking and Exploratory Search* (PI: Professor Aniket Kittur).

- Research **Yahoo InMind Project, 2016.**
- Grant Co-authored the proposal: Mobile Intelligent Assistants: *From Search Results to Search Landscapes* (PI: Professor Aniket Kittur).
- 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 11th 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)

Selected Publications

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

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

Joseph Chang, Jason S. Chang, and Roger Jyh-Shing Jang. Learning to find translations and transliterations on the web. In *Proceedings of the Annual Meeting of the Association for Computational Linguistics* (rate: 20%), 2012.

Joseph Chee Chang, Nathan Hahn, and Aniket Kittur. Supporting mobile sense-making through intentionally uncertain highlighting. In *Proceedings of the Annual ACM Symposium on User Interface Software & Technology* (rate: 20.6%), 2016.

Joseph Chang, Richard Tzong-Han Tsai, and Jason S. Chang. Wikisense: Supersense tagging of wikipedia named entities based wordnet. In *Proceedings of the Pacific Asia Conference on Language, Information and Computation* (rate: 25%), 2009.

Jian-Cheng Wu, Joseph Chang, Yi-Chun Chen, Shih-Ting Huang, Mei-Hua Chen, and Jason S. Chang. NTHU NLPLAB system description. In *Proceedings of the Seventh Workshop on Building Educational Applications Using NLP*, 2012.

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**