Yun-Nung (Vivian) Chen

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EDUCATION

CARNEGIE MELLON UNIVERSITY
PhD in Computer Science - Language & Information Technologies
Expected 2016 | Pittsburgh, PA
Cum. GPA: 3.92

NATIONAL TAIWAN UNIVERSITY
BS & MS in Computer Science & Information Engineering
2009, 2011 | Taipei, Taiwan

RESEARCH INTERESTS

Spoken Language Understanding
Spoken Dialogue System
Natural Language Processing
Information Extraction
Summarization
Speech Application
Machine Learning

AWARDS

RESEARCH
Best Student Paper Award, IEEE ASRU'13 [< 0.6%]
Best Poster Award, CMU LTI SRS 2013
Best Student Paper Shortlist, ISCA INTERSPEECH'12 [< 0.8%]
Best Student Paper Award, IEEE SLT'10 [< 2%]
ACLCLP Thesis Award, ACLCLP, Taiwan

ACADEMIC
Phi Tau Phi Award
Excellent Teaching Assistant Award, NTU
Presidential Award, NTU (5 times)
Connected Life Special Prize, Yahoo! Taiwan
MOE Technologies Incubation Scholarship, Taiwan
Government Scholarship for Studying Abroad, Taiwan
US Google Anita Borg Memorial Scholarship Finalist
Advanced Speech Technologies Scholarship, Taiwan
Graduate Research Fellowship, CMU
Pen Wen Yuan Scholarship, Taiwan

SKILLS

PROGRAMMING
C/C++, Python, JAVA, Perl, LaTeX

LANGUAGES
Chinese (native), English (fluent), Taiwanese (intermediate)

EXPERIENCE

CARNEGIE MELLON UNIVERSITY | Research Fellow
August 2011 – Present | Pittsburgh, PA

- **Spoken language understanding**: automatically acquire domain ontologies for dialogue systems
- **Dialogue act classification**: sparse modeling on noisy ASR
- **Natural language generation**: a two-stage stochastic email generator for modeling sender styles and topics
- **Multi-party speech summarization**: a multi-layer random walk algorithm to incorporate speaker information
- **Brain-enabled speech application**: integrate brain activity to boost the ASR accuracy and detect misunderstanding in dialogue systems

NATIONAL TAIWAN UNIVERSITY | Research Assistant
Sep 2008 – Aug 2011 | Taipei, Taiwan

- **Key term extraction**: extract key terms from lectures using branching entropy for key phrases and rich features for keywords
- **Speech summarization**: a random walk algorithm with automatically extracted key terms
- **Spoken term detection**: a random walk re-ranking approach to consider acoustic similarity between utterances for computing reliable relevance scores

MICROSOFT RESEARCH | Research Intern
2014 Summer, 2015 Summer | Mountain View, CA

- **Actionable item detection**: convolutional deep structured semantic models to detect actionable items in meetings
- **Unsupervised relation detection**: map dependency-based entity contexts from a text domain to a spoken domain to capture relational surface forms

SELECTED PUBLICATIONS

- Chen et al., **"Detecting Actionable Items in Meetings by Convolutional Deep Structured Semantic Models,"** (to appear) in Proc. of ASRU, 2015.
- Chen et al., **"Matrix Factorization with Knowledge Graph Propagation for Unsupervised Spoken Language Understanding,"** in Proc. of ACL-IJCNLP, 2015. [acceptance rate: 15.6%]
- Chen et al., **"Unsupervised Induction and Filling of Semantic Slots for Spoken Dialogue Systems Using Frame-Semantic Parsing,"** in Proc. of ASRU, 2013. [Best Student Paper Award – Top 1%]
- Chen and Metze, **"Integrating Intra-Speaker Topic Modeling and Temporal-Based Inter-Speaker Topic Modeling in Random Walk for Imporved Multi-Party Meeting Summarization,"** in Proc. of INTERSPEECH, 2012. [Best Student Paper Shortlist -- Top 1%]
- Chen et al., **"Automatic Key Term Extraction from Spoken Course Lectures Using Branching Entropy and Prosodic/Semantic Features,"** in Proc. of SLT, 2010. [Best Student Paper Award -- Top 2%]