

Yow-Ting (Orina) Shiue


薛祐婷

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Education

M.S. in Computer Science and Information Engineering (CSIE) National Taiwan University (NTU), Taipei, Taiwan	June 2017
GPA 4.23 / 4.30	Rank 9 / 131
B.S. in CSIE & B.A. in Chinese Literature, NTU, Taipei, Taiwan	June 2015
GPA 4.24 / 4.30 (CSIE major: 4.29 / 4.30)	Rank 1 / 111

Awards & Honors

Google Women Techmakers Scholar (Asia Pacific)	2015
Member of the Phi Tau Phi Scholastic Honor Society of the R.O.C	2015
 8 NTU Presidential Awards	2011 – 2015

Publications [Major Research Field: **Natural Language Processing**]

Peer-reviewed Conference Papers

- [1] Chung-Chi Chen, Hen-Hsen Huang, **Yow-Ting Shiue**, Hsin-Hsi Chen. 2018. Numeral Understanding in Financial Tweets for Fine-grained Crowd-based Forecasting. In *Proceedings of the International Conference on Web Intelligence (WI 2018)* (to appear).
- [2] **Yow-Ting Shiue**, Hen-Hsen Huang, Hsin-Hsi Chen. 2018. Correcting Chinese Word Usage Errors for Learning Chinese as a Second Language. In *Proceedings of COLING 2018, the 27th International Conference on Computational Linguistics* (pp. 2410-2422).
- [3] Yang-Yin Lee, Ting-Yu Yen, Hen-Hsen Huang, **Yow-Ting Shiue**, Hsin-Hsi Chen. 2018. GenSense: A Generalized Sense Retrofitting Model. In *Proceedings of COLING 2018, the 27th International Conference on Computational Linguistics* (pp. 1662-1671).
- [4] **Yow-Ting Shiue**, Wei-Yun Ma. 2017. Improving Word and Sense Embedding with Hierarchical Semantic Relations. *2017 International Conference on Asian Language Processing (IALP 2017)* (pp. 350-353).
- [5] **Yow-Ting Shiue**, Hen-Hsen Huang, Hsin-Hsi Chen. 2017. Detection of Chinese Word Usage Errors for Non-Native Chinese Learners with Bidirectional LSTM. In *Proceedings of 55th Annual Meeting of the Association for Computational Linguistics (ACL 2017)* (pp. 404-410). [Acceptance rate: 18%]
- Conference travel grant by **Foundation for the Advancement of Outstanding Scholarship**, Taiwan
- [6] **Yow-Ting Shiue**, Hsin-Hsi Chen. 2016. Detecting Word Usage Errors in Chinese Sentences for Learning Chinese as a Foreign Language. In *Proceedings of 10th Language Resources and Evaluation Conference (LREC 2016)* (pp. 220-224).
- Conference travel grant by **Ministry of Science and Technology**, Taiwan

Demo Paper


- Yow-Ting Shiue**, Hen-Hsen Huang, Hsin-Hsi Chen. 2018. A Chinese Writing Correction System for Learning Chinese as a Foreign Language. In *Proceedings of COLING 2018, the 27th International Conference on Computational Linguistics* (pp. 137-141).

Workshop Paper

- Yow-Ting Shiue**, Hen-Hsen Huang, Hsin-Hsi Chen. 2018. NTU NLP Lab System at SemEval-2018 Task 10: Verifying Semantic Differences by Integrating Distributional Information and Expert Knowledge. In *Proceedings of the 12th International Workshop on Semantic Evaluation (SemEval 2018)* (pp. 1027-1033).
- Ranked **3rd** / 26 teams in SemEval 2018 Task 10: Capturing Discriminative Attributes

Thesis

Yow-Ting Shiue. 2017. Detection and Correction of Chinese Word Usage Errors for Learning Chinese as a Second Language. National Taiwan University Master Thesis, Taipei, Taiwan. — [2], [5], [6]

 **Master Thesis Merit Prize** of the Association of Computational Linguistics and Chinese Language Processing (ACLCLP)

Research Experience

Full-time Research Assistant Sept. 2017 – present

- [[PI](#)] Prof. Hsin-Hsi Chen, **Natural Language Processing Lab**, CSIE, NTU
- Semantic difference extraction from text — [8]
- Chinese learner error correction with neural machine translation — [7]
- Chinese listening comprehension [within **top 30** teams in the nationwide “Talk to AI” contest]
- Join discussions of all other research topics in the lab

Research Intern July 2015 – July 2017

- [[PI](#)] Dr. Wei-Yun Ma, **Chinese Knowledge Information Processing Group (CKIP)**, Institute of Information Science, Academia Sinica
- [[Topic](#)] Improving Word and Sense Embedding with Hierarchical Semantic Relations — [4]
 - Incorporate lexical knowledge into word/sense embeddings
 - Show improvements on intrinsic and extrinsic tasks, especially dependency parsing

Undergraduate Research Jan. 2014 – June 2015

- [[Advisor](#)] Prof. Hsin-Hsi Chen, Natural Language Processing Lab, CSIE, NTU
- [[Topic](#)] Detecting Chinese Word Usage Errors for Learning Chinese as a Foreign Language — [6]
- **2014 National Science Council College Student Research Project (No: 103-2815-C-002-089-E)**
- Combine single-character features, language model features and dependency relation features to determine whether a Chinese sentence segment contains word usage errors

Part-time Research Assistant Sept. 2012 – Oct. 2015

- [[PI](#)] Prof. Zhao-Ming Gao, Department of Foreign Languages and Literatures, NTU
- Automated English composition / oral exam scoring
- Design interactive learning website for the Freshman English course
- Develop Android apps for English pronunciation / translation / dialogue practices

Teaching Experience

Teaching Assistant	 Excellent Teaching Assistant Award	Feb. 2017 – June 2017
- [Course] Natural Language Processing , Spring 2017, Prof. Hsin-Hsi Chen, CSIE, NTU		
- Design term projects and introduce to students, grade exams, office hour		
Teaching Assistant	 Excellent Teaching Assistant Award	Sep. 2016 – Jan. 2017
- [Course] Information Retrieval and Extraction , Fall 2016, Prof. Hsin-Hsi Chen, CSIE, NTU		
- Design term projects and introduce to students, grade exams, office hour		
Teaching Assistant		Feb. 2012 – June 2012
- [Course] Data Structure and Algorithm , Spring 2012, Prof. Hsin-Mu Tsai, CSIE, NTU		
- Design homework problems, grade programming assignments, office hour		
Learning Partners from Deans List, NTU		Oct. 2011 – June 2012
- Provide learning consultation to students in need over the campus		
- [Subjects] Introduction to Computer, C/C++/Java Programming, Data Structure and Algorithm, Systems Programming		
Instructor		July 2011 – Aug. 2011
- Taipei First Girls' High School Informatics Contestant Training Program		
- Give lectures on graph traversal algorithms, assign practice problems, track learning progress		

Work Experience

System Administrator	July 2014 – June 2015
- Bio-IT Station, Institute of Information Science, Academia Sinica	
Frontend / Backend Web Developer	July 2014 – Sept. 2014
- OBOOK Inc. (2014 Red Herring Asia Top 100 Winner)	
R&D Internship	July 2012 – Aug. 2012
- Software Quality Assurance Department, Trend Micro Inc., Taipei	

Contests

Merit Prize, iNSIGHT Certificated App Magic Camp	2012
- <i>Bookie</i> : an Android app that helps the user find and store books by ISBN or barcode	
- Fetch information from libraries and online book stores	
- User-specified tags can be put on every book record for the ease of browsing	
Admitted to the Taiwan Olympiad in Informatics Training Camp (TOI) , 1 st stage	2010
- Within top 30 high school students nationwide	
Third Prize, 2009 Taipei Informatics Contest	2009
Second Prize, 2009 Taipei Software Design Contest	2009
Merit Prize, 2008 National Problem Solving Contest on Internet	2008
Merit Prize, 2008 Taipei Informatics Contest	2008
Merit Prize, 2008 Taipei Software Design Contest	2008

Selected Projects

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| Intelligent Course Registration Bot | https://github.com/henryyang42/NTU-Course-Bot | 2017 |
| <ul style="list-style-type: none"> - An intelligent conversational bot that helps students find the courses they would like to register - [Main components] LSTM-based language understanding, RL-based dialogue manager, NN-based natural language generation - Support natural language query of course title, instructor, classroom, schedule and reviews | | |
| 🏆 [Rank] 3rd / 19 teams (Award from Appier Inc.) | | |
| Simple Reading Comprehension [Kaggle in class competition] | | 2016 |
| <ul style="list-style-type: none"> - Given an English essay and a question in the form of a declarative sentence with an entity blanked out, select the correct entity from 5 choices according the essay. - [Rank] 1st / 26 teams (Accuracy: 0.8293) | | |
| Blog Text Emoticon Prediction [Kaggle in class competition] | | 2016 |
| <ul style="list-style-type: none"> - Given a Chinese sentence and a position that is an emoticon, predict the unknown emoticon from a set of 40 different ones. - [Rank] 1st / 27 teams (MAP@3: 0.3088) | | |
| Malware Collocation Extraction via Parallel Vertical Mining on Top-K Frequent Patterns | | 2014 |
| <ul style="list-style-type: none"> - [Advisor] Dr. Chung-Tsai Su & Pin Wu from Trend Micro Inc. - Develop the PVTk algorithm on Hadoop to extract malware collocations - PVTk outperforms the well-known PFP when potentially most frequent patterns have low supports. | | |
| Let's Write in Chinese – Auto Correction of Chinese Typing Based on Web Search | | 2013 |
| <ul style="list-style-type: none"> - Combine a general language model with a language model constructed with web search snippets to correct a user input string | | |
| Clusit! – GPU Accelerated Clustering of Visited Web Pages | | 2013 |
| <ul style="list-style-type: none"> - A browser extension for clustering the browsing history - Implement a parallel version of K-Means with CUDA that can finish clustering in a few seconds | | |
| Linkree: Store & Share Your Progress of Knowledge via a Tree of Browsed Web Pages | | 2012 |
| 🏆 Excellent Award from Wantoto Inc. | | |
| <ul style="list-style-type: none"> - <i>Linkree</i>: a browser extension that keeps track of the “branching behavior” of Internet surfer - A sidebar in which the sequence of browsed web pages within the tab is recorded with their screenshots - A global browsing history in the form of a tree - User can “cut” out a sub-tree, generate a URL, and share the bundle of links with the URL. | | |

Others

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| Google Grace Hopper Conference Travel Grant Recipient (Orlando, Florida, U.S.A.) | 2017 |
| Attend Ochanomizu University Japanese Summer Program, Tokyo, Japan | 2016 |
| Complete the Trend Micro Cloud Computing Program in NTU | 2015 |
| Attend Microsoft Summer Camp in MSRA, Beijing, China | 2013 |
| Team leader , NTU Computer Science Camp (for high school students) | 2011 |
| Solved 292 problems on UVa Online Judge (user name: orina) | |