

Yow-Ting (Orina) Shiue

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Education

Ph.D. in Computer Science , University of Maryland (UMD), College Park, MD	Aug. 2019 – present
M.S. in Computer Science and Information Engineering (CSIE) , National Taiwan University (NTU)	June 2017
Thesis Detection and Correction of Chinese Word Usage Errors for Learning Chinese as a Second Language — [3, 6, 7]	🏆 Master Thesis Merit Prize of the Association of Computational Linguistics and Chinese Language Processing (ACLCLP)
B.S. in CSIE & B.A. in Chinese Literature, NTU	June 2015

Awards & Honors

UMD CMNS Dean's Fellowship (outstanding academic achievement)	Aug. 2019 – present
Google Women Techmakers Scholar (Asia Pacific)	2015
Member of the Phi Tau Phi Scholastic Honor Society of the R.O.C (top 1%)	2015
🏆 8 NTU Presidential Awards (top 5% in the department)	2011 – 2015

Technical Skills

Programming Languages	Python, C/C++, PHP, JavaScript, Java, Perl, R
Machine Learning Frameworks	scikit-learn, PyTorch, Keras, TensorFlow
NLP Toolkits	nlTK, spaCy, CoreNLP, gensim, OpenNMT

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

Peer-reviewed Conference Papers

- [1] Ting-Yu Yen, Yang-Yin Lee, **Yow-Ting Shiue**, Hen-Hsen Huang, Hsin-Hsi Chen. MSD-1030: A Well-built Multi-Sense Evaluation Dataset for Sense Representation Models. *12th Language Resources and Evaluation Conference (LREC 2020)*.
- [2] Chung-Chi Chen, Hen-Hsen Huang, **Yow-Ting Shiue**, Hsin-Hsi Chen. Numeral Understanding in Financial Tweets for Fine-grained Crowd-based Forecasting. *2018 IEEE/WIC/ACM International Conference on Web Intelligence (WI 2018)*.
- [3] **Yow-Ting Shiue**, Hen-Hsen Huang, Hsin-Hsi Chen. Correcting Chinese Word Usage Errors for Learning Chinese as a Second Language. *COLING 2018, the 27th International Conference on Computational Linguistics*.
- [4] Yang-Yin Lee, Ting-Yu Yen, Hen-Hsen Huang, **Yow-Ting Shiue**, Hsin-Hsi Chen. GenSense: A Generalized Sense Retrofitting Model. *COLING 2018*. | **Area Chair Favorite**
- [5] **Yow-Ting Shiue**, Wei-Yun Ma. Improving Word and Sense Embedding with Hierarchical Semantic Relations. *2017 International Conference on Asian Language Processing (IALP 2017)*.
- [6] **Yow-Ting Shiue**, Hen-Hsen Huang, Hsin-Hsi Chen. Detection of Chinese Word Usage Errors for Non-Native Chinese Learners with Bidirectional LSTM. *55th Annual Meeting of the Association for Computational Linguistics (ACL 2017)*. | **Acceptance rate: 18%**
- [7] **Yow-Ting Shiue**, Hsin-Hsi Chen. Detecting Word Usage Errors in Chinese Sentences for Learning Chinese as a Foreign Language. *10th Language Resources and Evaluation Conference (LREC 2016)*.

Demo Paper

- [8] **Yow-Ting Shiue**, Hen-Hsen Huang, Hsin-Hsi Chen. 2018. A Chinese Writing Correction System for Learning Chinese as a Foreign Language. *COLING 2018*.

Workshop / Shared Task Papers

- [9] Calvin Bao*, **Yow-Ting Shiue***, Chujun Song, Jie S. Li, Marine Carpuat. The University of Maryland's Submissions to the WMT20 Chat Translation Task: Searching for More Data to Adapt Discourse-Aware Neural Machine Translation. *5th Conference on Machine Translation (WMT 2020)*. * equal contribution
- [10] **Yow-Ting Shiue**, Hen-Hsen Huang, Hsin-Hsi Chen. NTU NLP Lab System at SemEval-2018 Task 10: Verifying Semantic Differences by Integrating Distributional Information and Expert Knowledge. *12th International Workshop on Semantic Evaluation (SemEval 2018)*.
🏆 **Ranked 3rd** / 26 teams in SemEval 2018 Task 10: Capturing Discriminative Attributes

Research & Work Experience

Research Associate — [1, 2, 4, 8, 10]	Sept. 2017 – Aug. 2019
PI Prof. Hsin-Hsi Chen, Natural Language Processing Lab , CSIE, NTU	
Semantic difference extraction from text / Chinese writing error correction with neural machine translation / Chinese listening comprehension Joined discussions of all other research projects in the lab	
Research Intern — [5]	July 2015 – July 2017
PI Dr. Wei-Yun Ma, Chinese Knowledge Information Processing Group (CKIP) , Academia Sinica	
Part-time Research Assistant	Sept. 2012 – Oct. 2015
PI Prof. Zhao-Ming Gao, Department of Foreign Languages and Literatures, NTU	
Worked on automatic scoring of English writing & oral exam (Accuracy: 0.71 for pass/fail prediction) Developed interactive websites & apps for English pronunciation / translation / dialogue exercises	
System Administrator, Bio-IT Station, Academia Sinica	July 2014 – June 2015
Set up workstations; installed library required by researchers; Dealt with network security issues	
Frontend / Backend Web Developer, OBOOK Inc., Owlting Group	July 2014 – Sept. 2014
Constructed order / payment / shipping management system; improved product browsing UI	
R&D Internship, Software Quality Assurance Department, Trend Micro Inc.	July 2012 – Aug. 2012
Developed project management tools to improve the efficiency of collaboration	

Selected Projects

Intelligent Course Registration Bot https://github.com/henryyang42/NTU-Course-Bot	2017
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	
🏆 Ranked 3rd / 19 teams (Award from Appier Inc.)	
Simple Reading Comprehension [Kaggle in class competition]	2016
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. Ranked 1st / 26 teams (Accuracy: 0.8293)	
Blog Text Emoticon Prediction [Kaggle in class competition]	2016
Given a Chinese sentence and a position that is an emoticon, predict the unknown emoticon from a set of 40 different ones. Ranked 1st / 27 teams (MAP@3: 0.3088)	
Malware Collocation Extraction via Parallel Vertical Mining on Top-K Frequent Patterns	2014
Advisor Dr. Chung-Tsai Su & Pin Wu from Trend Micro Inc.	
Developed the PVTK algorithm on Hadoop to extract malware collocations PTVK outperforms the well-known PFP when potential most frequent patterns have low supports.	
Let's Write in Chinese – Auto Correction of Chinese Typing Based on Web Search	2013
Combined a general language model with a language model constructed with web search snippets to correct a user input string	
<i>Bookie</i> : an Android app that helps the user find books by ISBN or barcode	2012
Designed MySQL table schema and constructed PHP API for the App	
🏆 Merit Prize, iNSIGHT Certificated App Magic Camp, NTU	

Contests, Activities, Service & Others

Grace Hopper Celebration Scholarship , Iribe Initiative for Inclusion and Diversity in Computing, UMD	2020
ACL 2020 Student Volunteer/Scholarship	2020
Reviewer (invited) , 1st Workshop on Financial Technology and Natural Language Processing	2019
Google Grace Hopper Conference Travel Grant Recipient (Orlando, Florida, U.S.A.)	2017
Completed the Trend Micro Cloud Computing Program in NTU	2015
Attended Microsoft Summer Camp in MSRA, Beijing, China	2013
Learning Partners from Deans List, NTU (learning consultation for students in need)	2011-2012
Instructor , Taipei First Girls' High School Informatics Contestant Training Program	2011
Admitted to the Taiwan Olympiad in Informatics Training Camp (TOI) , 1 st stage	2010
Within top 30 high school students nationwide	
Solved 292 problems on UVa Online Judge (user name: orina)	