

Education

- 2020 **University Fellowship**, *Department of Linguistics*, Ohio State University.
 - GPA 4.00/4.00, TOEFL 112/120, GRE 335/340.
 - University Fellowship for the doctoral program.
- 2015–2017 **M.Sc.**, *Department of Computer Science & Information Engineering*, National Taiwan University.
 - GPA 3.90/4.30, ranking 70/152.
- 2011–2015 **B.Sc.**, *Department of Computer Science & Information Engineering*, National Taiwan University.
 - GPA 4.08/4.30, ranking 4/111.
 - The Presidential Awards: Autumn 2013, Autumn 2012, Spring 2012.

Experience

- 2021–2022 **ML Engineer**, *Taiwan AI Labs 台灣人工智慧實驗室*.
 - Research publication on biomedical literature mining ([NAR](#)).
 - Developed pubmedKB (https://github.com/jacobvsdaniel/pubmedkb_core).
 - End-to-end relation extraction for biomedical literature.
 - Entity recognition and normalization for genes, variants, diseases, chemicals, and populations.
 - Open relation extraction, closed relation extraction, and odds ratio statistics extraction.
 - Other research and developments
 - (Main developer) plant gene function annotation: collaborate with [IPB, NTU 台大植科所](#)
 - (Main developer) phenotype-to-gene annotation: collaborate with [Taipei Veterans General Hospital 台北榮總](#)
 - (Joint research) polygenic risk score; t-cell receptor binding; single-cell analysis
- 2018–2020 **Research Assistant**, *Institute of Information Science, Academia Sinica 中央研究院*.
 - Research publication
 - Named entity recognition ([AAAI](#), [EMNLP](#))
 - Relation extraction ([ACL](#))
 - Knowledge graph ([LREC](#)).
 - Developed CkipTagger (<https://github.com/ckiplab/ckiptagger>).
 - A state-of-the-art, light weight, customizable neural package for traditional Chinese.
 - Integrating word segmentation, part-of-speech tagging, and named entity recognition.
 - Competed in the 2018-2019 [Formosa Grand Challenge](#) 科技大擂台.
 - Spoken question answering for traditional Chinese.
 - 2nd-place in the short-answer track, 3rd-place in the multiple-choice track, out of 143 teams.
 - Developed the strongest models for the team in both tracks; model ensemble; speech recognition denoising and segmentation.
 - Competed in the [IJCNLP-2017 DSAP](#) shared task: sentiment analysis for Chinese phrases.
 - Developed all the models; 1st-place in the arousal track, 3rd-place in the combined track, out of 13 teams.
- 2014–2016 **QA Engineer**, *Trend Micro 趨勢科技*.
 - Developed integrated test automation for an enterprise Intrusion Prevention System (IPS).
 - For the user-awareness module: Active Directory and LDAP test environments.
 - For the TLS stack: man-in-the-middle connections, handshake protocols, data encryption protocols.
 - For the application traffic scan engine: extract packets in anomalous applications.
- Summer 2013 **Intern Engineer**, *InfoKeyVault Technology 銓安智慧科技*.
 - Porting a secure, encrypted custom Windows file system to a custom Linux Virtual File System.
- Part-time **Teaching Experience**.
 - Spring 2016, Teaching Assistant (Introduction to AI), *Department of CSIE, NTU 台灣大學*.
 - Designing program assignments and test automation; tutoring and reviewing term projects and term exams.
 - 2011-2013, Math Tutor, *HER-JER Math After-class School 赫哲數學*.
 - Tutoring high school students; writing detailed solutions for term exams and college entrance exams.

Publications

- 2022 **pubmedKB: An Interactive Web Server to Explore Biomedical Entity Relations from Biomedical Literature**.
 - *Peng-Hsuan Li, Ting-Fu Chen, Jheng-Ying Yu, Shang-Hung Shih, Chan-Hung Su, Yin-Hung Lin, Huai-Kuang Tsai, Hsueh-Fen Juan, Chien-Yu Chen, and Jia-Hsin Huang.*
 - *Nucleic Acids Research (NAR)*.
- 2020 **Why Attention? Analyze BiLSTM Deficiency and Its Remedies in the Case of NER**.
 - *Peng-Hsuan Li, Tsu-Jui Fu, Wei-Yun Ma.*
 - In Proceedings of the [AAAI Conference on Artificial Intelligence \(AAAI\)](#).

- 2020 **CA-EHN: Commonsense Analogy from E-HowNet.**
- *Peng-Hsuan Li, Tsan-Yu Yang, Wei-Yun Ma.*
 - In Proceedings of The 12th Language Resources and Evaluation Conference ([LREC](#)).
- 2019 **GraphRel: Modeling Text as Relational Graphs for Joint Entity and Relation Extraction.**
- Tsu-Jui Fu, *Peng-Hsuan Li, Wei-Yun Ma.*
 - In Proceedings of the 57th Annual Meeting of the Association for Computational Linguistics ([ACL](#)).
- 2019 **HWE: Word Embedding with Heterogeneous Features.**
- Jhih-Sheng Fan, Mu Yang, *Peng-Hsuan Li, Wei-Yun Ma.*
 - In Proceedings of 2019 IEEE 13th International Conference on Semantic Computing ([ICSC](#)).
- 2017 **Leveraging Linguistic Structures for Named Entity Recognition with Bidirectional Recursive Neural Networks.**
- *Peng-Hsuan Li, Ruo-Ping Dong, Yu-Siang Wang, Ju-Chieh Chou, Wei-Yun Ma.*
 - In Proceedings of the 2017 Conference on Empirical Methods in Natural Language Processing ([EMNLP](#)).
- 2017 **CKIP at IJCNLP-2017 Task 2: Neural Valence-Arousal Prediction for Phrases.**
- *Peng-Hsuan Li, Wei-Yun Ma, Hsin-Yang Wang.*
 - In Proceedings of the [IJCNLP 2017, Shared Tasks](#).