

# YI-HUI (LILY) LEE

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## SUMMARY

Fourth year Ph.D. Candidate in Computer Science passionate in Artificial Intelligence looking for a position as Research Scientist Intern. Prefer but not limit to working on Information Security, Machine Perception and Artificial Intelligence.

## EXPERIENCE

### The University of Texas at Dallas (PyTorch, AWS-Mturk, spaCy, AllenNLP, Gensim)

Richardson, TX

Research Assistant, Advisor: **Prof. Shuang Hao**

Aug. 2018 to Present

- Research on analyzing and defending against online illicit activity.
- Design deep learning-based method to detect fake information in social media.
- Build token embedding by **Gensim** and group with Hierarchical/ K-means clustering. Define IoT device domain-name patterns.

### Institute of Information Science, Academia Sinica

Taipei, Taiwan

Research Assistant, Advisor: **Prof. Wei-Yun Ma**

Jul. 2016 to Jun. 2018

- Researched on natural language processing and deep learning related topics.
- Designed a product embedding model to assign an unique product to entities mentioned in the blog. (**Published in LREC 2020**[1].)
- Proposed bootstrapping method to extract instances from unstructured movie articles. (**Published in WWW Demo 2017**[4].)

### National Taiwan Normal University

Taipei, Taiwan

Research Assistant, Advisor: **Prof. Jia-Ling Koh**

Sep. 2015 to Aug. 2017

- Research on knowledge discovery and data/ text mining
- Designed a web search-based approach to extract conditional relation tuple for diseases and symptoms.
- **Published in IEEE/WIC/ACM International Conference on Web Intelligence (WI 2018)**, Santiago[3].

### IBM

Taipei, Taiwan

Software Engineering Intern

Jul. 2015 to Dec. 2015

- Worked on troubleshooting solutions for auto insurance batch system such as insurance renewal and reimbursement accounting.
- Debugged and detected in user acceptance testing stage, increased acceptance rate to 95%.
- Led internship group of 12 people on planning panel talks and designing a business proposal for emotional cloud service.

## SELECTED PROJECT

### Computer Vision with Convolutional Neural Networks

Aug. 2020 to May. 2021

- Combine deep learning (**MTCNN, cascade**) and rule-based algorithm to detect eye-blinking leading 81.36% accuracy. (**TensorFlow**)
- Design Attention-Based Bilingual Image2caption Emoji Model (**ABBIE**) for image captioning. (**PyTorch, Python, cv2, Hugging Face**)
- **ABBIE** used three subsystem components; Transformer, bilingual language model and image caption model.

## AWARDS

- **4th Place (4/1564)**, ACM RecSys X Trivago Challenge 2019 (**Published in RecSys 2019** [2].)
- **Travel Grant**, Google Grace Hopper Celebration, 2018
- **Women Techmakers Scholarship**, Google (Asia Pacific Area), 2017
- **1st Place**, PIXNET (Taiwan) CHATBOT HACKATHON, 2017
- **Top 25**, ATCC X IBM (Taiwan) 11th National College Business Case Competition, 2013

## PUBLICATIONS

[1] Mu Yang, Chi-Yen Chen, **Yi-Hui Lee**, Qian-Hui Zeng, Wei-Yun Ma, Chen-Yang Shih, Wei-Jhih Chen, "Headword-Oriented Entity Linking: A New Entity Linking Task with Dataset and Baseline," *Proc. LREC*, May 2020.

[2] Kung-Hsiang Huang, Yi-Fu Fu, Yi-Ting Lee, Tzong-Hann Lee, Yao-Chun Chan, **Yi-Hui Lee**, Shou-De Lin, "A-HA: A Hybrid Approach for Hotel Recommendation," *Proc. the 13th ACM Recommender Systems Challenge Workshop, RecSys Challenge*, September 2019.

[3] **Yi-Hui Lee**, Jia-Ling Koh, "Conditional Relationship Extraction for Diseases and Symptoms by a Web Search-Based Approach," *Proc. IEEE/WIC/ACM International Conference on Web Intelligence*, December 2018.

[4] Peng-Yu Chen, **Yi-Hui Lee**, Yueh-Han Wu, Wei-Yun Ma, "IExM: Information Extraction System for Movies," *Proc. ACM WWW Demo Track*, April 2017. (**Best Demo - Special Mention Award**)

## EDUCATION

### The University of Texas at Dallas

Richardson, TX

Doctor of Philosophy in Computer Science

Aug. 2018 to May. 2023(expected)

### National Taiwan Normal University

Taipei, Taiwan

Master of Science and Bachelor of Science in Computer Science and Information Engineering

Sep. 2011 to Aug. 2017

## SKILLS

- **Programming Language:** Python, PyTorch, Tensorflow, C/C++, Java, Matlab, PHP, HTML, MySQL, JavaScript, CSS
- **Platform:** Keras, AWS EC2, GCP, Linux, Twitter API, Spark, Hadoop, OpenCL, OpenMP, ~~ETX~~, Scrapy