Ting-Wei **Lu**

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Education

Cornell Tech — *New York City, US*

M.S. in Information Systems and Applied Information Science — *Aug.2021 - Present*

National Taiwan University — *Taipei, Taiwan*

B.S. in Engineering Science and Ocean Engineering (GPA: 3.77/4.0) — *Sep.2016 - Aug.2020*

Skills

Programming Python, C++, Java, C, SQL, Bash, JavaScript, HTML, CSS (ordered by proficiency)

Systems & Libraries UNIX, Linux, PyTorch, Tensorflow, Flask, Scrapy, Selenium, Git

Work & Teaching Experience

Academia Sinica (the Most Preeminent Academic Institution of Taiwan) — *Taipei, Taiwan*

Research Assistant (Full Time) — *Aug. 2020 - Jun. 2020*

- Member of the Chinese Knowledge and Information Processing Laboratory (https://ckip.iis.sinica.edu.tw/). Worked on various research topics about Natural Language Processing with a focus on Data-to-Text Generation.
- Devised a Dynamic Content Planning schema for Data-to-Text Generation that restores the bidirectional dependencies between content plans and summaries. Fine-grained generation control was achieved using simple natural language commands.
- Launched a website demonstrating our Dynamic Content Planning algorithm. The site converts NBA Box-Score data into a game summary.
- Website: https://ckip.iis.sinica.edu.tw/service/data2text/

Cathay Financial Holdings Co., Ltd. — *Taipei, Taiwan*

Data Scientist Intern — *Jul. 2019 - Jun. 2020*

- Published a cross-datatype representation learning toolkit for tabular data using a BERT-based model.
- Experiments show that our work raises the performances of downstream tasks, especially those consist of unlabeled data and missing values.
- Toolkit: https://github.com/dwaydwaydway/BERTable

National Taiwan University — *Taipei, Taiwan*

Research Assistant (Part-Time) — *Mar. 2020 - Jun. 2020*

- Improved & deployed a web scraper with an 80% speed-up compared to the prior system.
- Designed a syntax processing pipeline using POS tagging and constituency parsing that extracts essential information in job postings.

National Taiwan University — *Taipei, Taiwan*

Teaching Assistant — *Sep. 2019 - Jan. 2020*

- Teaching assistant for the Machine Learning course [EE5184]

Publications & Competitions & Projects

The 8th Dialog System Technology Challenge - Schema-Guided Dialogue State Tracking — *DSTC8*

https://github.com/MiuLab/LION-Net

- Built a seq2seq dialogue state generator which requires 85% less execution time and 80% less memory usage than the official baseline approach while achieving higher prediction accuracy.
- 20th place out of 26 teams in the 8th Dialog System Technology Challenge.
- Kai-Ling Lo, **Ting-Wei Lu**, Tzu-Teng Weng, I-Hsuan Chen, Yun-Nung Chen. 2020. Lion-net: Lightweight ontology-independent networks for schema-guided dialogue state generation. *In Dialog System Technology Challenge Workshop (**DSTC8**) in Proceedings of Thirty-Fourth AAAI Conference on Artificial Intelligence (**AAAI 2020**), New York, USA, 2020.*

Self-Navigating Boat Steeplechase Contest — *NTU*

https://github.com/dwaydwaydway/Self-Navigating-Boat

- Based on a 3D-printed boat, constructed a self-navigating boat with sonar sensors, motors, and an STM32 Nucleo-64 board (F303RE).
- Won 1st place (out of 14 teams) in the steeplechase competition.

Ticket Reservation System — *NTU*

https://github.com/dwaydwaydway/Reservation-System

- Developed a ticket reservation system in Jave using Command Design Pattern with a MySQL backend system.
- Supports all conventional functionalities such as inquiry, ticket-booking, seat-arranging, and order-revising.

Leadership & Extracurricular Activities

Varsity Baseball Team — *National Taiwan University*

- Captain of the department baseball team and member of the varsity team. Won 2 regional championships.

Alumni Association — *Minghua Junior High*

- Vice president of the alumni association of Minghua Junior High. Assisted underrepresented students on school work.