

# Ting-Wei Lu

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## Education

### Cornell Tech

M.S. in Information Systems and Applied Information Science

New York City, US

Aug. 2021 - Present

### National Taiwan University

B.S. in Engineering Science and Ocean Engineering (GPA: 3.77/4.0)

Taipei, Taiwan

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

### Chinese Knowledge and Information Processing Laboratory, Academia Sinica

Taipei, Taiwan

#### Research Assistant (Full Time)

Aug. 2020 - Jun. 2020

- Worked on various NLP topics with a focus on Data-to-Text Generation.
- Devised a Dynamic Content Planning schema (DCP) for Data-to-Text Generation that mimics the thought process of humans.

### Cathay Financial Holdings Co., Ltd.

Taipei, Taiwan

#### Data Scientist Intern

Jul. 2019 - Jun. 2020

- Developed an unsupervised representation learning toolkit for tabular data, boosting the performance of a variety of downstream tasks.

### National Taiwan University

Taipei, Taiwan

#### Research Assistant (Part-Time)

Mar. 2020 - Jun. 2020

- Improved & deployed a web scraper with a 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/Projects

### Lightweight ONtology-independent Networks for Schema-Guided Dialogue State Generation

DSTC8

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

- Built a seq2seq dialogue state generator which requires 85% less training time and 80% less memory usage than the official baseline approach while achieving higher prediction accuracy.
- 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.

### Data-to-Text Interactive Website

CKIP Lab

<https://ckip.iis.sinica.edu.tw/service/data2text/>

- Launched a website demonstrating our Dynamic Content Planing (DCP) algorithm. The site converts NBA Box-Score data into a game summary.
- Flask, PyTorch, Python, JavaScript, HTML, CSS

### BERTable: Universal Representation Learning Toolkit for Tabular Data

Cathay Holdings

<https://github.com/dwaydwaydway/BERTable>

- Published a cross-datatype representation learning toolkit for tabular data using transformer-based model.
- Experiments shows that our work raises the performances of downstream tasks, especially those consists of unlabeled data and missing values.
- PyTorch, Python

### Ticket Reservation System

NTU

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

- Developed a ticket reservation system in Java using Command Design Pattern with a MySQL back-end system.
- Java, MySQL, JDatePicker

## Competitions

2019 **20<sup>th</sup> / 26 teams.** The 8<sup>th</sup> Dialog System Technology Challenge.

International

2019 **1<sup>st</sup> / 14 teams.** Self-Navigating Boat Contest.

National Taiwan University

2017 **Honorable Mention.** App Creativity Contest.

National Taiwan University

## 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.