

Yu-Hsiang Huang

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Education

National Taiwan University (NTU)

Taipei, Taiwan

ADVISOR: PROF. SHOU-DE LIN

2022/09 - PRESENT

M.S. MAJORED IN COMPUTER SCIENCE AND INFORMATION ENGINEERING

National Taiwan University (NTU)

Taipei, Taiwan

B.S. MAJORED IN COMPUTER SCIENCE AND INFORMATION ENGINEERING

2018/09 - 2022/06

B.S. MINORED IN ECONOMICS

2019/09 - 2022/06

Working Experience

Microsoft

Taipei, Taiwan

APPLIED SCIENTIST INTERN

2023/07 - 2024/06 (Expected)

- Implement **hotfix pipeline** to reduce the time required to change data for the spelling model from **several hours** to **several minutes**.
- Implement **regex override pipeline** to speed up the deep speller model inference by over **100%**.

Appier

Taipei, Taiwan

MACHINE LEARNING SCIENTIST INTERN

2023/02 - 2023/06

- Develop a **personalized recommendation model** that achieve a remarkable **10%** increase in click-through rates compared to previous methods.
- Develop a **GPT-based product tagging model** that shows approximately a **40%** performance improvement compared to the previous tagging methods during annotation experiments.
- Implement **multi-threading** and backup mechanisms to accelerate the GPT-based tagging process, resulting in a significant **2.5x** speed boost.

Project

Surrogate-Assisted Document Embedding Inversion Attack

ADVISOR: PROF. SHOU-DE LIN

Fall 2022 - Spring 2023

- Develop a model that can invert document embeddings using an **adversarial training** framework, given limited query data.
- Our method outperforms other baseline methods by more than **20%** in terms of the precision score under limited training data.

Gpt-based voice assistant

SKILLS: PROMPTING, NATURAL LANGUAGE PROCESSING

Spring 2023

- Develop a voice assistant based on GPT that can perform various tasks.
- Using the **prompting method** to reduce the time required to develop a new skill from **several days** to **several hours**.

Travelight

SKILLS: WEB DEVELOPMENT

Fall 2022

- Solve the route planning problem by introducing a traveling salesman problem solver.
- Utilizing **multi-threading** approach to achieve asynchronous requests, we speed up place searches by more than **50%**.

Academic Experience

Machine Discovery & Social Network Mining Lab

NTU

ADVISOR: PROF. SHOU-DE LIN

Fall 2021 - Spring 2022

- Investigate the privacy issue and adversarial attack method for document embedding.

Machine Intelligence and Understanding Lab

NTU

ADVISOR: PROF. YUN-NUNG CHEN

Spring 2021

- Evaluate the transferability of the dialogue state tracking method on different datasets.

Teaching Assistant

NTU

PROBABILITY (PROF. SHOU-DE LIN)

Spring 2022

MACHINE LEARNING FOUNDATIONS/TECHNIQUES (PROF. HSUAN-TIEN LIN)

Fall 2020

Skills

Machine Learning, Natural Language Processing, Software Engineering, Web Development