

# Yu-Hsiang Wang

✉ shane.wang0817@gmail.com | 🌱 garlicwang.github.io | 📷 GarlicWang | 📺 shanewang0817 | 📺 shanewang0817

## Education

### National Taiwan University

B.S. IN ELECTRICAL ENGINEERING

Taipei, Taiwan

Sep. 2019 - Present

- **GPA** : overall: 4.09/4.30, major: 4.12/4.30
- **Honors** : Dean's List Award 2020 Fall (Top 5% of students)
- **Selected Courses** : Data Structure, Algorithms, Machine Learning, Reinforcement Learning, Computer Architecture, Financial Technology, Intro. to Computer, Linear Algebra, Discrete Mathematics, Signals and Systems, Embedded System, Networking and Multimedia

## Research Experience

### Computational Machine Learning Lab

RESEARCH ASSISTANT, ADVISOR: PROF. CHO-JUI HSIEH

UCLA

Jun. 2023 - Present

- Proposed **the first concept-level uncertainty method for Large Language Models (LLMs)**, which can be used as a hallucination detector.
- Extracted concepts using GPT-3.5 with few-shot examples and calculated uncertainty by measuring the variance of concept scores using a zero-shot classifier pretrained on MNLI dataset.
- Achieved an AUROC of 0.821 on Wiki-QA dataset on the concept-level hallucination detection task.

### interdisciplinary Data Science and Signal Processing Lab

RESEARCH ASSISTANT, ADVISOR: PROF. CHE LIN

National Taiwan University

Sep. 2022 - Present

- Proposed a heterogeneous graph neural network (HGNN) framework integrating a type-aware edge predictor and a feature classifier to capture the heterogeneity of edges and optimize the embedding in the shared feature space.
- Achieved **SOTA performance** with an F1-score of 0.94 on the ACM dataset, **outperforming benchmark models by 3%** in heterogeneous node classification tasks. (Our paper is still under reviewed by ICASSP 2024)
- Secured an 8-month research funding grant from the National Science and Technology Council.

### Computational Finance and Data Analytics Lab

RESEARCH ASSISTANT, ADVISOR: PROF. CHUAN-JU WANG

Academia Sinica

Oct. 2021 - Feb. 2023

- Collaborated with the streaming company KKStream with the aim of constructing a comprehensive and extensive knowledge graph.
- Proposed an unsupervised entity alignment algorithm that leverages pre-trained Sentence BERT and neighbor information to determine node similarity across diverse KGs.
- Achieved an F1-score of 0.881 on the DWY15k dataset and 0.58 on KKStream's proprietary dataset, marking a **37% performance improvement**.

## Work Experience

### CMoney

AI ENGINEER INTERN, SUPERVISOR: DR. JASON CHOU

Taipei, Taiwan

Jun. 2022 - Jun. 2023

- Developed an explainable recommendation system based on knowledge graphs and graph attention networks to implement personalized push notification for the most popular stock forum in Taiwan.
- Designed **type-aware attention mechanism** to determine the edge weights based on the representation of users and relations.
- Achieved an 8.53% click-through rate in A/B testing, indicating an impressive **3.3x performance enhancement**.

### TechInvest Ltd.

CO-FOUNDER & CHIEF OPERATING OFFICER

Taipei, Taiwan

Nov. 2021 - June 2022

- We were committed to invest in startups by providing technical consultancy instead of traditional financial capital. We aim to help startups without technical background connect with suitable software outsourcing partners.
- I engaged in business development, and had successfully established partnerships with companies in various industries.
- We were admitted to the **accelerator program** hosted by NTU TEC.

## Extracurricular Activities

### Stanford ASES Summit

DELEGATE OF 2023

Stanford University

Apr. 2023

- Selected to be **the only Taiwanese representative** among the top 24 student entrepreneurs worldwide to participate in the ASES Summit held at Stanford University.
- Presented a novel business concept related to the Asia daigou market to the VC panel and achieved a **top-three rank in the pitch competition**.

### Creativity and Entrepreneurship Program

STUDENTS

National Taiwan University

Sep. 2021 - June. 2022

- Represented my team in the pitch competition and achieved a **top-tier team ranking** among 10 competing teams.