

KUO-HAN (JOHNSON) HUNG

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EDUCATION

National Taiwan University (NTU)

Taipei, Taiwan

Bachelor's in Computer Science & Information Engineering

Sept. 2020 - Dec. 2024 (anticipated)

- Overall GPA: 4.24/4.3; Major GPA: 4.26/4.3; Ranking: top 3%
- Academic Honors: Presidential Award * 2; Dean's List Award * 3
- Research Honors: Dean's Bachelor Thesis Award
- Additional Program: Creativity and Entrepreneurship Program

University of California, Berkeley

CA, USA

Summer Session Program in EECS Dept.

Jun. - Aug. 2022

- Grades: 4.0/4.0; Course taken: CS161 (Computer Security)

RESEARCH EXPERIENCE

IBM Research

NY, USA

Visiting Scholar · Advisor: Dr. Pin-Yu Chen

Jun. 2024 - Present

- Researched on defense for prompt injection attack of LLM agents.

MiRA, Multimedia indexing, Retrieval, and Analysis research group

Taipei, Taiwan

Undergraduate Researcher · Advisor: Prof. Winston H. Hsu

Feb. 2022 - Present

- Researched on reward model for robot manipulation. [ICMLW '24](#)
 - Developed a hierarchical reward model for long-horizon tasks using vision and language models.
 - Improved long-horizon manipulation success by 43% over previous best methods.
- Researched on few-shot imitation learning for robotics. [Preprint](#)
 - Proposed and designed domain-shifted anomaly detection on robot behavioral sequences.
 - Achieved top performance in 17 out of 21 testing cases compared to strong baselines.

MiuLab, Machine Intelligence and Understanding Laboratory

Taipei, Taiwan

Undergraduate Researcher · Advisor: Prof. Yun-Nung Chen

Feb. 2022 - Present

- Created a benchmark for multi-retrieval knowledge-based visual question answering for large vision language models.
- Researched open-domain conversational question answering. [AAACL '22](#)
 - Employed knowledge distillation to enhance the efficacy of historical answers.
 - Achieved state-of-the-art performance in open-domain conversational retrieval with 77.9 (R@5).

WORK EXPERIENCE

Microsoft, Bing Team

Remote (Team in Mountain View)

Applied Scientist Intern

Jul. 2023 - Jun. 2024

- Integrated Bing Maps services with Microsoft Copilot for complicated map queries.
- Developed a new path finding algorithm that learns from historical data to achieve over a 10x speedup.
- Invented a context-aware map search system and automated evaluation using Large Language Models, enhancing search engines for conversational queries.

Cinnamon AI

Taipei, Taiwan

Deep Learning Intern

Jun. - Aug. 2022

- Developed and implemented the first image-driven recipe retrieval system with adaptable ingredients, alongside a cross-modal retrieval system with a vision-ingredients seq2seq architecture.

Courtero (US Start-up)

Full-stack Developer & Founding Member

Remote

Jan. - Aug. 2022

- Developed the map and rating systems for the Courtero App using React Native and Firebase.
- Selected for the Harvard Innovation Labs' Spring Venture Program.

TEACHING EXPERIENCE

Teaching Assistant

CSIE5043: Machine Learning, NTU

Taipei, Taiwan

Jan. 2023 - Jun. 2023

- Developed two assignments focused on machine learning proofs.
- Organized and coordinated the final project machine learning competition.

SELECTED PUBLICATIONS [\[GOOGLE SCHOLAR\]](#)

- [1] **Kuo-Han Hung**[†], Pang-Chi Lo[†], Jia-Fong Yeh[†], Han-Yuan Hsu, Yi-Ting Chen, Winston H Hsu, "VICtoR: Learning Hierarchical Vision-Instruction Correlation Rewards for Long-horizon Manipulation" in ICML 2024 workshop: Aligning Reinforcement Learning Experimentalists and Theorists.
- [2] Jia-Fong Yeh, **Kuo-Han Hung**[†], Pang-Chi Lo[†], Chi-Ming Chung, Tsung-Han Wu, Hung-Ting Su, Yi-Ting Chen and Winston H Hsu, "AED: Adaptable Error Detection for Few-shot Imitation Policy" Preprints.
- [3] Hung-Chieh Fang[†], **Kuo-Han Hung**[†], Chao-Wei Huang, and Yun-Nung Chen, "Open-Domain Conversational Question Answering with Historical Answers" in Findings of ACL 2022

LEADERSHIP/ACTIVITIES

NTU Google Developer Student Club (GDSC)

Founding Member & Core Team Member & Academic Instructor

Taipei, Taiwan

Sept. 2022 - Dec. 2022

- Established and expanded the NTU GDSC community, increasing from 3 to over 70 participants.
- Initiated a 20-person study group and led a team to develop an AI kidney disease management, achieving a top 1 Taiwan rank in the Google Solution Challenge.

HONORS

Scholarship

- The Memorial Scholarship Foundation to Lin Hsiung Chen (*top 1% scholarship in Taiwan*) Nov. 2023
- Charity Trust Jason International Fund Scholarship (*issued by Acer Taiwan*) Sept. 2022

Awards

- Bachelor Thesis Dean's Award, at NTU (*top 2 thesis in the EECS department*) Jul. 2024
- Presidential Award, at NTU; 2x Recipient (*for top 2% students*) Fall '22, '23
- Dean's List Award, at NTU; 3x Recipient (*for top 5% students*) Spring '21, '22, '23
- Bigstack second prize, at NTU CSIE Undergraduate Thesis Exhibition Jun. 2023
- Creativity and Entrepreneurship Excellence Award, at NTU D-school Jun. 2023
- Honorable Award, at NTU CSIE Undergraduate Thesis Exhibition Jun. 2022
- LINE Fresh Hackathon Special Award (*top 5/300+ teams*) Dec. 2021

SKILLS

Programming Language: C/C++, Python, JavaScript, Golang, Shell Script, L^AT_EX
Tech Skills: PyTorch, Keras, Docker, Flask, React, Node.js, Git, ML, Web Dev, Azure
Language: Chinese, English (TOEFL: 104)