TUN-YUAN CHANG (張惇媛)

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🌐 https://tunyuanchang.github.io/   ⬡ tunyuanchang

EDUCATIONS

National Tsing Hua University, Hsinchu, Taiwan　　　　　Sep. 2025 - Present
Ph.D. in Institute of Information Systems and Applications　　　　GPA: 4.25/4.30
Thesis: Optimizing Context-Aware Edge-Cloud AI Assistants in the LLM Era
Advisor: Prof. Cheng-Hsin Hsu

National Tsing Hua University, Hsinchu, Taiwan　　　　Sep. 2024 - Aug. 2025
M.S. in Institute of Information Systems and Applications
Transfer into the doctoral program with academic performance and research potential

National Tsing Hua University, Hsinchu, Taiwan　　　　Sep. 2020 - Jun. 2024
B.S. in Department of Computer Science　　　　　　　　　GPA: 3.90/4.30
Minor in Department of Quantitative Finance

RESEARCH INTERESTS

Multimodal Large Language Models, Machine Learning, Smart Cities, Digital Twins, and related fields.

AWARDS

- **Graduate Research Fellowship**, National Science and Technology Council　　2025
- **Travel Grant** (ACM MM'25), ACM SIGMM　　　　　　　　　　　　　　2025
- **Travel Grant** (NSTC'25), National Science and Technology Council　　　　2025

PUBLICATIONS

Journal Article

[1] **Microservice Provisioning and Event-Driven Adaptation in Heterogeneous IoT Settings**
Yuqiao Li, Fangqi Liu, ***Tun-Yuan Chang***, Cheng-Hsin Hsu, and Nalini Venkatasubramanian
Elsevier Pervasive and Mobile Computing (PMC)
Accepted for Publication

Conference Paper

[1] **Harvesting Temporal Correlation in Large Vision-Language Models: Using Pose Estimation as a Case Study**
Tun-Yuan Chang, Kenneth Chandra, and Cheng-Hsin Hsu
In Proc. of ACM International Workshop on Large Vision–Language Model Learning and Applications (LAVA'25)
Dublin, Ireland, October 2025

[2] **Egocentric Daily Video Question Answering with Token-Efficient Storyboard Retrieval**
Zihao Ding, ***Tun-Yuan Chang***, Cheng-Hsin Hsu, and Yao Liu
In Proc. of ACM International Workshop on Network and Operating System Support for Digital Audio and Video (NOSSDAV'26)
Hong Kong, April 2026

[3] **Enabling Ubiquitous Ambient Intelligence in the MLLM Era: From Spatio-Temporal Embeddings to Dynamic Edge Orchestration**
Tun-Yuan Chang
In Proc. of ACM SIGMM Conference on Multimedia Systems (MMSys'26)
Hong Kong, April 2026 (Doctoral Symposium)

EXPERIENCE

Ambient Intelligence for Immersive Networked Systems Lab (AIINS), National Tsing Hua University   Mar. 2024 - Present

Research Assistant   *PI: Prof. Cheng-Hsin Hsu*

Research Description: Multimodal Large Language Models, Smart Cities, and Digital Twins

- **NS-3 and MAVLink-Based Unmanned Aerial Vehicle (UAV) Simulation**
  Building a testbed for UAV communication in fluctuating network conditions and complex environments.

- **Context-Aware Edge-Cloud AI Assistants**
  Proposing unified architectures within a multimodal model framework to support various downstream tasks.

Introduction to Computer Networks Course, National Tsing Hua University   Fall 2024 & Spring 2026

Teaching Assistant

- Offering tutorials to support students in understanding fundamental concepts.

- Collaborating with course instructors in designing course materials, assignments, exams, and grading.

Network Research Lab, Institute of Information Science, Academic Sinica   Jun. 2024 - Aug. 2024

Summer Intern   *PI: Prof. Ling-Jyh Chen*

Research Description: Internet-of-Things and Navigation Systems

- Developing a navigation system using the open-source project GraphHopper, supported by real-time sensor readings from IoT devices.

- Creating an interactive map visualization with the open-source project Leaflet, featuring air quality readings and route planning assistance.

Last update: February 15, 2026