

Yu-Tai Lin

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EDUCATION

Ph.D. in Electrical and Computer Engineering

Georgia Institute of Technology

Aug. 2022 - Aug. 2027 (Expected)

Atlanta, USA

Master of Science in Computer Science

National Tsing Hua University

Sep. 2016 - Jun. 2018

Hsinchu, Taiwan

Bachelor of Science in Engineering Science

National Cheng Kung University

Sep. 2012 - Jun. 2016

Tainan, Taiwan

RESEARCH EXPERIENCES

Research Assistant in MARGA

Georgia Institute of Technology

Aug. 2022 - Present

Atlanta, USA

- Propose a cooperative and communication-aware wireless localization system.
- Design an RF-based exercises recognition and repetition counting system.
- Advisor: Prof. Karthikeyan Sundaresan

Research Assistant in SNACLab

Academia Sinica, Taiwan

Aug. 2020 - Jul. 2022

Taipei, Taiwan

- Propose a greedy-based bandwidth allocation algorithm for intermittent wireless communication.
- Develop a real-world testbed for an intermittent wireless communication system.
- Propose an ensemble machine learning model (NN+XGBoost) to detect network anomalies.
- Advisor: Prof. Chih-Yu Wang

Research Assistant in VCLab

National Tsing Hua University

Sep. 2016 - Aug. 2018

Hsinchu, Taiwan

- Proposed a cluster-based Autoencoder model to predict popular video clips for 5G small cell caching.
- Developed a video clip data collection and pre-processing system.
- Advisor: Prof. Jia-Shung Wang

PUBLICATIONS

- [1] Alan Liu, **Yu-Tai Lin**, and Karthikeyan Sundaresan. “View-agnostic Human Exercise Cataloging with Single MmWave Radar”. In *ACM IMWUT / UbiComp*, 2024.
- [2] **Yu-Tai Lin** and Karthikeyan Sundaresan. “A New Paradigm of Communication-Aware Collaborative Positioning for FutureG Wireless Systems”. In *24th ACM MobiHoc*, 2023.
- [3] **Yu-Tai Lin**, Chi-Yang Kuo, Ming-Hsuan Tsai, and Chih-Yu Wang. “Queueing Model for Intermittent Communication and Computing of Battery-less Edge Computing”. In *2023 IEEE International Conference on Communications Workshops (ICC Workshops)*, 2023.
- [4] **Yu-Tai Lin**, Yu-Cheng Hsiao, and Chih-Yu Wang. “Enabling Mobile Edge Computing for Battery-less Intermittent IoT Devices”. In *2021 IEEE Global Communications Conference (GLOBECOM)*, 2021.
- [5] Tzu-Hsin Yang, **Yu-Tai Lin**, Chao-Lun Wu, and Chih-Yu Wang. “Voting-Based Ensemble Model for Network Anomaly Detection”. In *2021 IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*, 2021.
- [6] **Yu-Tai Lin**, Chia-Cheng Yen, and Jia-Shung Wang. “Video Popularity Prediction: An Autoencoder Approach With Clustering”. *IEEE Access*, volume 8, 2020.
- [7] Yi-Ting Chen, Chia-Cheng Yen, **Yu-Tai Lin**, and Jia-Shung Wang. “Cooperative Caching Plan of Popular Videos for Mobile Users by Grouping Preferences”. In *16th International Conference on Pervasive Intelligence and Computing (PiCom)*, 2018.

AWARDS & HONORS

- Georgia Tech ECE Telecom connections best presenter award, USA, 2023
- NSF Student Travel Grant for ACM MobiHoc 2023, National Science Foundation, USA, 2023
- 1st place (out of 87 teams from around the world) of ZYELL-NCTU Network Anomaly Detection Challenge, IEEE ICASSP Grand Challenge, 2021.
- Undergraduate Research Creativity Award, Ministry of Science and Technology, Taiwan, 2016.
- Research Grant For Undergraduate Students, Ministry of Science and Technology, Taiwan, 2015.

ACADEMIC SERVICES

- Reviewer of Journal of Network and Computer Applications (JNCA), 2024
- Mentor of ECE Opportunity Research Scholar's Program at Georgia Tech, 2023

WORK EXPERIENCES

Software Engineer

Synology Inc.

Nov. 2018 - Aug. 2020

New Taipei, Taiwan

- **Led product data collection and analysis cloud service design and maintenance.**
 - Optimized cloud service code to improve the stability and performance.
 - Optimized AWS services infrastructure to reduce costs by 30%.
 - Initiated an Infrastructure as Code design to deploy the cloud service quickly.
 - Created a monitoring system to improve service's responsiveness and visibility.
- **Initiated a package installation framework for Docker-based applications to protect the Synology NAS system.**
 - Designed a framework to help Docker applications create docker-compose files.
 - Prevented Docker applications from getting root access to protect the NAS system.
- **Managed package porting and maintenance for Synology NAS.**
 - Optimized the package installation framework.

Software Engineer (Intern)

Gigabyte Inc.

Jul. 2014 - Aug. 2014

New Taipei, Taiwan

- Collaborated with a team to build a PC-cluster environment.
- Conducted experiments to compare performance between PC-cluster and server environments.

LEADERSHIP EXPERIENCE

Team Captain

Engineering Science Department Basketball Team

Nov. 2013 - Aug. 2015

Tainan, Taiwan

- Led the department team to the quarterfinals in the Inter-departmental Cup.

TECHNICAL SKILLS

- **Programming Languages:** Python, C/C++, JavaScript, PHP, Matlab
- **Operating System:** Linux
- **Database:** MySQL, SQLite, Elasticsearch, Prometheus
- **Others:** AWS, Docker, Git, Tensorflow, GDB, Grafana, Flask