Po-han Li

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EDUCATION

The University of Texas at Austin

Aug. 2021 – Present

Texas, U.S.A.

MS/Ph.D. in Electrical and Computer Engineering

• Decision, Information, and Communications Engineering (DICE) track

Sep. 2016 – Jul. 2020

National Taiwan University B.S. in Electrical Engineering

Taipei, Taiwan

• GPA: overall: 4.26/4.30 (3.99/4.0), last 60: 4.29/4.30, ranking: 4/177

• Honors: Dean's List*3

EXPERIENCE

Graduate Research Assistant

Aug. 2021 – Present

Swarm Lab and Autonomous Systems Group

Texas. U.S.A

• Co-advised by Dr. Sandeep Chinchali and Dr. Ufuk Topcu.

• Research Interenst: networked control, decentralized data sharing, and task-aware communication.

Research Fellow Aug. 2020 – Jul. 2021

Center for IoT Innovation at National Taiwan University of Science and Technology

Taipei, Taiwan

- Achieve a 20% throughput improvement in KIVA project, a simulation platform for automated guided vehicles (AGV) in a large-scale logistics warehousing center.
- Participate in the pandemic disease simulation project, an agent-based simulation platform for disease spreading in different circumstances inspired by COVID-19.

Machine Learning and Data Scientist Intern

Oct. 2019 – Mar. 2021

China Network Systems Co., Ltd.

Taipei, Taiwan

- Create a data collecting system of network traffic and an alerting system of abnormal traffic.
- Create data visualization graphics and translated complex datasets into comprehensive visual representations.
- Analyze data pattern and build prediction models for churn rate (unsubscribe) prediction.
- Use white box (raspberry pi) distributed in the core net and network terminals to collect network condition data.

Aug. 2019 – Jun. 2020 Research Assistant

Prof. Wanjiun Liao's Internet Research Lab, National Taiwan University

Taipei, Taiwan

- Participate in 5G mobile edge computing technology research and platform construction project supported by Ministry Of Science And Technology.
- Enhance the quality of service (QoS) of multi-view 3D videos by reinforcement learning.

Publications

My research interests include networked control, decentralized data sharing, and task-aware communication. Please check out my personal website for more detail.

- 1. Po han Li, Sandeep P. Chinchali, and Ufuk Topcu. Differentially private timeseries forecasts for networked control. Submission to American Control Conference 2023
- 2. Po-han Li, Ufuk Topcu, and Sandeep P Chinchali. Adversarial examples for model-based control: A sensitivity analysis. 58th Annual Allerton Conference on Communication, Control, and Computing (accepted), 2022
- 3. Oguzhan Akcin, Po han Li, Shubhankar Agarwal, and Sandeep P. Chinchali. Data games: A game-theoretic approach to swarm robotic data collection. In 6th Annual Conference on Robot Learning, 2022
- 4. Yuchong Geng, Dongyue Zhang, Po-han Li, Oguzhan Akcin, Ao Tang, and Sandeep P Chinchali. Decentralized sharing and valuation of fleet robotic data. In 6th Annual Conference on Robot Learning, 2021

TECHNICAL SKILLS

Languages: Chinese, English, Japanese

Programming Languages: Python, C++, SQL, Shell script, Julia

Libraries&Toolkits: PyTorch, Keras, pandas, cvxpy, NumPy, Git, LATEX

Data Visualization Tools: Tableau, Power BI