Po-han Li

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EDUCATION

University of Texas at Austin

Aug. 2021 – Present

MS/Ph.D. in Electrical and Computer Engineering

Texas, U.S.A.

- Research Interest: cloud robotic communication in decentralized networks, inference of large foundation models, differential privacy, and data compression in distributed networks. (see more details on my <u>Personal Website</u>)
- Co-advised by Prof. Sandeep Chinchali and Prof. Ufuk Topcu
- GPA: 3.93/4.00

National Taiwan University

Sep. 2016 – Jul. 2020

Taipei, Taiwan

B.S. in Electrical Engineering

- GPA: overall: 4.26/4.30 (3.99/4.0), last 60: 4.29/4.30. Ranking: 4/177
- Honors: Dean's List (2016 Fall, 2017 Spring, and 2018 Fall)
- College Student Research Scholarship from the Ministry of Science and Technology (2017-2019)

SELECTED PUBLICATIONS

For a complete list of my publications, please check my Google Scholar.

- 1. P. Li, S.K. Ankireddy, R. Zhao, H. N. Mahjoub, E. Moradi-Pari, U. Topcu, S. Chinchali, and H. Kim. Task-aware distributed source coding under dynamic bandwidth. *Advances in Neural Information Processing Systems (NeurIPS)*, 2023 <u>link</u>
- 2. **P. Li**, S. Chinchali, and U. Topcu. Differentially private timeseries forecasts for networked control. *American Control Conference (ACC)*, 2023 <u>link</u>
- 3. **P. Li**, U. Topcu, and S. Chinchali. Adversarial examples for model-based control: A sensitivity analysis. (*Allerton*), 2022 <u>link</u>
- 4. O. Akcin, **P Li**, S. Agarwal, and S. Chinchali. Decentralized data collection for robotic fleet learning: A game-theoretic approach. In *Conference on Robot Learning* (*CoRL*), 2022 <u>link</u>
- 5. Y Geng, D Zhang, P. Li, O. Akcin, A. Tang, and S. Chinchali. Decentralized sharing and valuation of fleet robotic data. In *Conference on Robot Learning* (CoRL), 2021 link

WORK EXPERIENCE

Graduate Research Assistant

Aug. 2021 – Present

 $Swarm\ Lab\ and\ UT\ Autonomous\ Systems\ Group$

Texas, U.S.A

- Foundation model selection and uncertainty estimation.
- Task-aware data transmission in heterogeneous networks.
- Decentralized data sharing in fleet robotic data.

Research Fellow Aug. 2020 – Jul. 2021

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

Taipei, Taiwan

Python, Tableau, Netlogo

- Built a simulation platform for automated guided vehicles (AGV) in large-scale logistics warehousing centers
- Optimized AGV routing policy to achieve a 20% throughput improvement of inventory picking

Machine Learning and Data Scientist Intern

Oct. 2019 – Mar. 2021

China Network Systems Co., Ltd.

Taipei, Taiwan

Python, Pytorch, pandas, SQL, Tableau, Shell script

- Analyzed data pattern and build prediction models for churn rate (unsubscribe) prediction
- Used Raspberry Pi distributed in the core net and network terminals to collect network quality data
- Created databases and interactive reports to monitor over 1M set-top boxes in real-time

Research Assistant Aug. 2019 – Jun. 2020

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

• Participated in 5G mobile edge computing technology research and platform construction project supported by Ministry Of Science And Technology.

• Enhanced the quality of service (QoS) of multi-view 3D videos by reinforcement learning

TECHNICAL SKILLS

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

Libraries&Toolkits: PyTorch, Gymnasium, Stable-Baselines3, Keras, CVXPY, Git, IATEX

Data Visualization Tools: Tableau, Power BI

TEACHING EXPERIENCE

ECE 381V Learning-based Optimal Control: Teaching assistant

Aug. 2023 – Dec. 2023

Extracurricular Activities

Code2College

Mentor July 2022 – Present

• Mentored underrepresented high school graduates to prepare for software engineering jobs or college interviews.

Student Council of National Taiwan University

Member of Parliament

Jan. 2019 – May. 2019

• Voiced concern about potential cyber security issues of the electrical voting system.

Student Association of Department of Electrical Engineering

Coordinator of Curriculum Reform

Sep. 2018 – Jun. 2019

• Collected student feedback on curriculum reform.

National Taiwan University Musical Club

Event Coordinator

Jan. 2016 – Jun. 2019

• Organized one original and one adapted musical production.