Po-han Li

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Education

University of Texas at Austin Aug. 2021 – Present
Ph.D. Candidate in Electrical and Computer Engineering *Texas, U.S.A.*

- Research Interest: multi-modal feature extraction, multi-modal data compression, cross-modal retrieval, and information extraction and sharing in multi-agent networks (see more details on my Personal Website)
- Decision, Information, and Communications Engineering (DICE) track
- Co-advised by Prof. Sandeep Chinchali and Prof. Ufuk Topcu
- GPA: 3.93/4.00

National Taiwan University Sep. 2016 – Jul. 2020
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 (2016 Fall, 2017 Spring, and 2018 Fall)
- College Student Research Scholarship from the Ministry of Science and Technology (2017-2019)

Work Experience

Meta Inc. May. 2024 – Aug. 2024
Machine Learning Software Engineer Intern @ Infra+Ranking & Foundational AI *California, U.S.A*

- Prediction calibration of Meta's multimodal foundation AI model for ads ranking
- Performance analysis and tracking of iterative model training
- Developed highly scalable classifiers and tools leveraging machine learning, regression, and rules-based models
- Adapted standard machine learning methods to best exploit distributed clusters

Center for IoT Innovation Aug. 2020 – Jul. 2021
Research Fellow @ National Taiwan University of Science and Technology *Taipei, Taiwan*

- 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

China Network Systems Co., Ltd. Oct. 2019 – Mar. 2021
Machine Learning and Data Scientist Intern *Taipei, Taiwan*

- 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

Internet Research Lab Aug. 2019 – Jun. 2020
Research Assistant @ National Taiwan University *Taipei, Taiwan*

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

Selected Publications

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

1. **P. Li**, S. Chinchali, and U. Topcu. CSA: Data-efficient mapping of unimodal features to multimodal features. *Under review*, 2024 **link**
2. **P. Li**, Y. Yang, M. Omama, S. Chinchali, and U. Topcu. Any2Any: Incomplete multimodal retrieval with conformal prediction. *Under review*, 2024 **link**
3. **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 **link**

4. **P. Li**, O. S. Toprak, A. Narayanan, U. Topcu, and S. Chinchali. Online foundation model selection in robotics. *Under review*, 2024 **link**

5. M. Omama, **P. Li**, and S. Chinchali. Exploiting distribution constraints for scalable and efficient image retrieval. *Under review*, 2024 **link**

6. 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 **link**

Teaching Experience

ECE 381V Learning-based Optimal Control: Teaching assistant — Aug. 2023 – Dec. 2023

Technical Skills

Programming Languages: Python, C++, SQL, Shell Script, Julia
Libraries&Toolkits: PyTorch, Huggingface, Gymnasium, Stable-Baselines3, Git, LaTeX
Data Visualization Tools: Tableau, Power BI

Academic Service

Reviewer — Aug. 2021 - Present

- Reviewers of IEEE Systems Journal 2023, CASE 2023, ICRA 2023, AAAI 2023, NeurIPS 2024, ICRA 2024, ICLR 2025, and AISTATS 2025.

Extracurricular Activities

UT Girl Day
Volunteer — Feb. 2023 and Feb. 2024

- Instructed guests of all ages on how to operate an AutoAuto vehicle using basic Python commands. **link**

REACT REU
Mentor — Aug. 2023

- Instructed undergraduate students to improve real-time computer vision models, excelling in image classification and object detection using Python.

Code2College
Mentor — Jul. 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.