

Wei-Cheng Lee

KAUST 1st year MS/PhD in Computer Science

weicheng.lee.frank@gmail.com

Research Interest

- Online Learning and Reinforcement Learning

Online reinforcement learning, Learning in games

- Optimization

Stochastic optimization, Performance Estimation Problem

Education

- **MS/PhD**, Computer Science, King Abdullah University of Science and Technology Aug 2024 – Present
GPA: 4.0/4.0

- **Graduate Work**, Computer Science, National Taiwan University Feb 2018 – June 2021
A⁺: Optimization Algorithms A: Prediction, Learning, and Games

- **Bachelor of Science**, Computer Science (Mathematics), National Taiwan University Sep 2012 – Jan 2018
A⁺: Analysis, Algebra, Linear Algebra, Probability, Numerical Methods, and Measure Theory

Publications

- [1] Ian E.H. Yen, **Wei-Cheng Lee**, Kai Zhong, Sung-En Chang, Pradeep Ravikumar, and Shou-De Lin, “*MixLasso: Generalized Mixed Regression via Convex Atomic-Norm Regularization*”. In Advances in Neural Information Processing Systems (NeurIPS), 2018
- [2] Ian E.H. Yen, **Wei-Cheng Lee**, Sung-En Chang, Arun S. Suggala, Shou-De Lin and Pradeep Ravikumar, “*Latent Feature Lasso*”. In International Conference on Machine Learning (ICML), 2017

Research Experience

- Non-convex Stochastic Optimization

Advisor: Prof. Francesco

Position: MS/PhD student

Aug. 2024 – present

- Under Review

- Online Reinforcement learning algorithms

Advisor: Prof. Chi-Jen Lu

Position: Research Assistant, Academia Sinica, Taiwan

Feb. 2022 – March. 2024

- Propose an alternative technique based on an entropic linear program instead of Tsallis entropy to prove the Hedge algorithm works for stochastic and adversarial settings in an infinite horizon average reward MDP with full information feedback

- Latent feature models

Advisor: Prof. Shou-De Lin

Position: Undergraduate Student, National Taiwan University, Taiwan

Sep. 2016 – Sep. 2018

- Compare different latent models such as tensor decomposition, variational inference, and combinatorial methods, and show the ability to handle large hidden dimensions.
- Propose the correct Lagrangian formulation of the Latent feature model objective.

Work Experience

- Research Assistant

Feb. 2022 – 2024 March

Institute of Information Science, Academia Sinica

- Proving regret guarantees of online reinforcement learning algorithms

- Research Assistant

Aug. 2021 – 2022 Jan

Graduate Institute of Biomedical Electronics and Bioinformatics National Taiwan University

- Using a language model to automatically transform cases into ICD10 for medical insurance

Honours and Awards

- Presidential Award, National Taiwan University

Spring 2014, Fall 2012

Awarded to the 5% of students each semester

TA Experience

- Reinforcement Learning, National Taiwan University

Spring 2025

- Optimization Algorithms, National Taiwan University

Fall 2019, Fall 2018

- Probability, National Taiwan University

Spring 2018, Spring 2015

Skills

- Programming

C/C++, Python(Pytorch), MATLAB, Julia