Wei-Cheng Lee

KAUST 1st year MS/PhD in Computer Science weicheng.lee.frank@gmail.com
Personal Website

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 *(Computing Systems and Concurrency, Numerical Methods/SDE, Online Learning, Data Analytics)*
- **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 Orabona
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. Show its ability from theory and experiment to handle large hidden dimensions and no assumptions on data distribution.
- Propose the correct Lagrangian formulation of the Latent feature model objective.
- Extend our matrix factorization techniques to a Generalized Linear Model setup and use it to denoise large-scale stock data.

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, Go