Wei-Cheng Lee

KAUST MS in Computer Science weicheng.lee.frank@gmail.com
Personal Website (For the most recent version)

Research Interest

- Optimization, Online Learning and Reinforcement Learning

Education

- **MS/PhD**, Computer Science, King Abdullah University of Science and Technology Aug. 2024 – Present
  GPA: 4.0/4.0 *(Computing Systems and Concurrency, Computer Vision, High Performance Computing)*
  GPA: 4.0/4.0 *(Numerical Methods and 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] **Wei-Cheng Lee**, Francesco Orabona, "*A Finite-Time Analysis of TD Learning with Linear Function Approximation without Projections nor Strong Convexity*". arXiv

[2] El Mehdi Saad, **Wei-Cheng Lee**, Francesco Orabona, "*New Lower Bounds for Stochastic Non-Convex Optimization through Divergence Composition*". The Annual Conference on Learning Theory (COLT), 2025

[3] 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

[4] 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

Work Experience

- Graduate Internship Program June. 2025 – July. 2025
Research & Dev Center, Saudi Aramco

- Developed and solved a Gas Oil Separation Plant (GOSP) optimization problem as an MINLP in Pyomo, and conducted scalability analysis on various network configurations.
- Enhanced Pyomo's core by modifying its source code to integrate JAX and finite difference methods for high-performance computation of gradients, Jacobians, and Hessians.

- Research Assistant Feb. 2022 – March. 2024
Institute of Information Science, Academia Sinica

- Proving regret guarantees of online reinforcement learning algorithms

- Research Assistant Aug. 2021 – Jan. 2022
Graduate Institute of Biomedical Electronics and Bioinformatics National Taiwan University

- Using the BERT model to automatically transform cases into ICD10 for medical insurance applications.

Honours and Awards

- Presidential Award, National Taiwan University (Awarded to the 5%) Spring 2014, Fall 2012

TA Experience

- Reinforcement Learning, KAUST 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, JAX), MATLAB, Julia, Go
- Language English, Chinese