Yuetong Xu

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Research Interests

Optimization, Machine Learning, Supply Chain, Revenue Management, and Pricing

Education

Operations Research Center, MIT 2023/09 – 2028/05 (Exp)

PhD in Operations Research, Current Overall GPA: 5.00/5.00

College of Physical Sciences, UCLA 2019/09 – 2023/06

Bachelor of Science in Mathematics of Computation, Overall GPA: 3.99/4.00

Research Experience

Exploring Behavior of Convex and Non-Convex Neural Networks in Transfer Learning 2022/06 – 2022/09

Advisor: Asst. Prof. Mert Pilanci, Stanford University

- This research seeks to compare the behavior of Convex ReLU neural networks and non-convex networks applied in transfer learning in terms of validation accuracy, training time, optimal number of neurons.
- The research expanded to exploring factors that influences high validation accuracies for beginning stages of training in transfer learning.

Improving Rate of Convergence of Incremental Gradient Descent Through Specific Ordering of Data 2021/09 – Present

Advisor: Asst. Prof. Baharan Mirzasoleiman, UCLA

- This research investigates the best ordering of the training data such that the convergence of Incremental Gradient Descent can be improved under convex condition.
- Analyze the hessian, gradient, and related features of the training data to help provide rigorous mathematical proof for our numerical results.

Meal Kit Preferences during COVID-19 Pandemic: Exploring User-Generated Content with Natural Language Processing Techniques 2020/07 – 2021/06

Advisor: Asst. Prof. Danyi Qi, Louisiana State University

- This research combines user-generated content, natural language processing, Latent Dirichlet Allocation (LDA)-based topic model, and difference in difference (DID) to explore the influence of COVID-19 on meal kit preferences.

Conference Paper

Meal Kit Preferences during COVID-19 Pandemic: Exploring User-Generated Content with Natural Language Processing Techniques 2021/08

Agricultural and Applied Economics Association (AAEA) 2021 Annual Meeting

Programming Skills

C, C++, Python (Fluent), R (Fluent), JavaScript (Intermediate), Julia

Able to implement machine learning algorithms (random forest, cluster analysis, PCA, LDA, CNN, RNN)

Fluent with text mining and natural language processing techniques