

Yuhang Du

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EDUCATION

- **London Business School, UK** *September 2021 - Present*
Ph.D in Management Science and Operations
- **Shanghai University of Finance and Economics(SUFE), China** *September 2017 - July 2021*
B.A. in Information Management and Information System
Overall GPA: **3.87/4.0** Rank: **1/112** GPA of Core Courses: **3.98/4.0** Rank: **1/112**

• CORE COURSES

Mathematics:	Mathematical Analysis, Linear Algebra, Probability Theory, Mathematical Statistics, Regression Analysis, Stochastic Processes
Optimization:	Dynamic Programming, Linear and Non-Linear Programming, Advanced Operations Research
Computer Science:	C++, Python, Data Structure, Database, Machine Learning, Deep Learning, Algorithms and Complexity Theory
Operations Management:	Operations Management

RESEARCH PROJECTS

Strategic Switchers, the Unique Feature of Carpooling (working paper)

Advisor: **Prof. Saif Benjaafar** (University of Minnesota), **Prof. Rowan Wang**, **Prof. Yini Gao** (Singapore Management University)

Keywords : carpooling; switcher; strategic behavior; equilibrium analysis

December 2019 - December 2020

This paper studies the operation of a carpooling system with the unique feature of having the strategic switchers, who can either be riders and take seats; or be drivers and offer seats, depending on the real-time imbalance of riders and drivers in the system. We build equilibrium models to study the system dynamics and compare the system having strategic switchers with a benchmark system having only pure riders and pure drivers. I did model checking, theorem proving as well as simulation experiments.

Optimization and Operations Research in Mitigation of a Pandemic (Accepted by Journal of the Operations Research Society of China)

Advisor: **Prof. Caihua Chen** (Nanjing University), **Prof. Dongdong Ge** (Shanghai University of Finance and Economics), **Prof. Yinyu Ye** (Stanford University)

Keywords : pandemic ; optimization ; machine learning

March 2020 - May 2021

In this paper, we provide a case study of DC demand replenishment planning (DCP) for Budweiser Korea during the time of COVID-19. We apply LightGBM algorithm and propose a three-stage optimization framework to make models more robust and flexible.

The Benefits of Order Batching in Online Fulfillment | Research Assistant

Advisor: **Prof. Linwei Xin** (The University of Chicago), **Xinshang Wang** (Alibaba's DAMO Academy)

Keywords : primal and dual algorithm; order batching; optimization

March 2020 - December 2020

The objective of this paper is to study the benefits of order batching. Instead of making real-time fulfillment, now we make decisions for every B (batch size) orders. Combining with a primal-dual framework and an online gradient descent (OGD) algorithm, we can compare the expected total costs of fulfilling customer orders over a finite horizon with different batch sizes.

INDUSTRY PROJECT AND COMPETITION

Xiamen International Bank "Digital Innovation Finance Cup" Data Modeling Competition

Keywords : machine learning; data mining; prediction

October 2019 - December 2019

In this competition, we used the real data (more than one million pieces) to predict whether an applicant for a loan will pay the debt as promised, so as to decrease the credit risks. We applied machine learning models (Random Forest, xgBoost and Gradient Boosting) to classify samples after feature engineering in which we used various methods such as PCA, WOE, and clustering. Finally, my team's performance was within the top 5%.

Mars MWC Supply Planning | Internship in Cardinal Operations (Shanghai Office)

Keywords : data management; inventory management; classification; prediction

October 2020 - December 2020

The aim of this project is to optimize the setting of safety stock days to reduce the lost rate. I developed a complete classification procedure for products and performed simulation to choose the best inventory replenishment policies for different clusters after classification.

HONORS AND AWARDS

Scholarships

- National Scholarship *October 2019*
- First Prize People's Scholarship from SUFE (three times) *September 2018, 2019, 2020*
- Yinyu Ye Scholarship (two times) *December 2018, 2019*
- Hong Kong Alumni Association Bauhinia Scholarship *October 2020*

Contests

- Meritorious Winner in Mathematical Contest in Modeling *April 2019*
- Second Prize of National College Students Mathematics Competition *November 2018*
- Second Prize of Shanghai University Students Mathematics Competition *November 2018*

Awards

- Outstanding Graduates in Shanghai *June 2021*
- Outstanding Graduate Thesis Award from SUFE *June 2021*