Zhi (James) Liu

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Tsinghua University, Beijing, China

EDUCATION

Tsinghua University *Sep 2016 - Jul 2020*

Major in Industrial Engineering *Beijing, China*

- Core GPA：3.6 / 4.0
- Relevant Coursework: Operations Research, Applied Stochastic Processes, Data Mining, Data Structure and Algorithm Analysis, Probability Theory, Statistical Inference, Modeling and Simulation, Facilities Planning
- Honors/Awards: Elite Students' Leader Award, Tsinghua University

Tsinghua University *Sep 2018 - Jul 2020*

Minor in Statistics *Beijing, China*

- GPA：3.9 / 4.0

RESEARCH EXPERIENCE

GPS Data for Truck-Route Analysis *Nov 2018 - Present*

- Project leader in this on-going research.
- Utilize ArcGIS to construct truck-routes from more than 1,000,000 threads of real GPS data, in order to recognize recurrent traffic jams and refine road network.
- Adviser: Prof. Hai Jiang, head of Center of Operations Research and Statistics

Genetic Algorithm in AGV Scheduling *Aug 2018 - Sep 2018*

- Constructed a thorough mathematical model to analyze the efficiency of multi-AGV systems.
- Used genetic algorithm to provide a viable scheduling scheme, with which entered the Contemporary Undergraduate Mathematical Contest in Modeling, and received second prize nationwide.

Analysis of Distribution of Dockless Shared Bikes *Nov 2017 - May 2018*

- Collected data from the campus to analyze the spatiotemporal flow of dockless shared bikes, and processed the data using an integer programming model to determine optimal sites for bike distribution.
- Created a detailed report which received praise from the department head and OFO, the leading shared bikes operator.
- Adviser: Prof. Hongxuan Huang

SELECTED COURSE PROJECTS

MODELING AND SIMULATION: *Oct 2018 - Dec 2018*

Simulation of Repair Personnel Scheduling and Dispatching

- Used Plant Simulation to model an office repair company.
- Derived an optimal staffing level and dispatching logic through simulation.

DATA MINING, METHODS AND APPLICATION: *Mar 2018 - May 2018*

Classification of Race Tracks and Prediction of Lap Times

- Used R to process lap times set by drivers through the years and racing car specifications, with which trained a classification model using logistic regression.
- Further used the data to predict future lap times with information about the car.

SKILLS

- **Programming:** C/C++ Programming (Proficient), R Programming (Proficient), Plant Simulation (Proficient), Matlab (Basic), Python (Basic)
- **Standardized Tests:** TOEFL(115, 30 in speaking), GRE(V160, Q167)
- **Languages:** Chinese (Native), English (Fluent), Min Dialect (Basic Speaking)

LEADERSHIP EXPERIENCE

Students' Association of Science and Technology in IE Department *Mar 2017 - Present*

Vice President *Beijing, China*

Student Government in Xiamen Foreign Language School *Sep 2014 - Sep 2015*

President *Xiamen, China*