Education

Shanghai Jiao Tong University ***(Bachelor)*** *Aug. 2021 - Jun. 2025 (expected)*

**Major:** Industrial Engineering (Core GPA: 3.99/4.30, Ranking: 1/55) **Minor:** Finance

**Core Courses:** Stochastic Models (100), Linear Algebra (98), Engineering Statistics (95), Operations Research (92)

**Awards:** National Scholarship, U.S. College Mathematical Contest in Modeling Finalist Award, Merit Student of Shanghai Jiao Tong University

Selected Research Experience

**Sentiment Explorational Analysis Based on DOUBAN Movie Reviews**  *Apr. 2024 - Jun. 2024*

*Analyze Chinese movie reviews using machine learning algorithms.*

**·Sentiment Classification:** Explored various methods to construct sentiment analysis models, such as relatively traditional dictionary-based tokenization methods and more advanced word embedding techniques, with Baidu's open-source Senta model as the baseline.

**·Further Exploration:** Took the Potential Film Score Manipulation into consideration, using t-tests and K-means clustering to detect self-boosting activity. Developed a movie search engine that allows users to search for open-ended paragraph statements.

**Autonomous Driving Algorithm Development** *Mar. 2024 - May. 2024*

*Fine-tune the ResNet-18 to achieve lane detection, integrating, lidar-based obstacle avoidance, and traffic light recognition.*

**·Model Construction:** Collected and labeled lane-line image data from a specific track, fine-tuned a pre-trained ResNet-18 model, and incorporated lidar-based obstacle avoidance and traffic light recognition features.

**·Results Presentation:** Achieved first place in the class racing competition through continuous improvement.

**Wordle Results Prediction and Classification Based on NLP** *(Thesis: Joy of Wordle: Based on Arima and WordleRT) Feb. 2023*

**·Prediction Task:** Employed the GESD algorithm for data outlier handling and constructed a dual ARIMA model for forecasting.

**·NLP Task:** Utilized high-dimensional word vectors processed by BERT, passing through a fully connected network to KL divergence analysis, obtaining prediction results, calculating mean loss for prediction confidence, and iteratively adjusting network structures for further analysis.

**·Challenges Addressed:** Implemented the GESD algorithm found in the literature to detect and handle outliers. To mitigate the problem of a small sample size provided in the dataset, incorporated the MC Dropout Layer at the model output to reduce overfitting.

**Simulation Evaluation and Optimization of N Bank's Operational Status** *Oct. 2023 - Dec. 2023*

*Simulate and model the operational status of a real bank in Arena software, and provide optimization solutions.*

**·Model Construction:** Conducted on-site research at a selected bank, utilized the collected data and made certain assumptions to create a simulation model of the bank's operational status using Arena, and then executed the model to identify existing issues.

**·Optimization Approach:** Established objective functions to minimize service time and maximize efficiency. Conducted combinatorial optimization based on real-world considerations and certain assumptions under given capacity and budget constraints. Employed OptQuest software to solve the optimization problem, with a social force model introduced to refine the model.

**Empirical Study on the Relationship between Female CEOs and Corporate Innovation Levels** *May 2023 - Jun. 2023*

*Construct a fixed effects model to analyze panel data and provide an economic analysis.*

**·Literature Review:** Proposed two null hypotheses *(H1: Female CEOs positively impact corporate innovation; H2: The likelihood of innovation driven by female CEOs in state-owned enterprises is lower than that in non-state-owned enterprises)* and determined the control variables such as board size, R&D, and revenue with reference to literature.

**·Model Establishment:** Utilized public data from CSMAR, preprocessed the data, and established a fixed-effects model for panel data analysis. Conducted robustness analysis, discussed endogeneity issues (*e.g.*, selection bias and individual heterogeneity), and used multi-period lagged explanatory variables to partially address the aforementioned concerns.

Leadership & Activities

**A+ Club of ME** *Core Member & Academic Counselor* *Jun. 2023 - Present*

**Ernst & Young (China) Advisory Limited** *Intern, Corporate Tax Department* *Aug. 2023 - Sep. 2023*

Skills

**Computer Skills:** Python, LaTeX, Stata, Minitab, Excel, PowerPoint, Word, Arena

**Language:** Fluent in English **(**CET4: 623/710; CET6: 615/710) and Mandarin (Native)