

LIU JIAQI

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<https://danaliu67.github.io/>

EDUCATION BACKGROUND

<i>The University of Hong Kong</i>	<i>Artificial Intelligence</i>	<i>2022.09-2024.07</i>
<i>Zhengzhou University (GPA3.4/4.0 First class Scholarship)</i>	<i>Financial Mathematics</i>	<i>2018.09-2022.06</i>
<ul style="list-style-type: none">● Core Courses: Computational intelligence and machine learning、Mathematical Model in Finance、Applied data mining and text analytics● Award: Provincial first prize of 2021 China Undergraduate Mathematical Contest in Modeling(CUMCM); National first prize of the first stage of the “Certification Cup Mathematical Modelling Contest”; First prize of “Zhengzhou University Mathematical Modelling” competition; Provincial second prize of the 11th “CP Group Cup ” Market Research and Analysis Competition; Received the “Double Thousand Plan” Scholarship awarded by Zhengzhou University.		

INTERNSHIP EXPERIENCES

<i>Sionlink Securities Co.,Ltd</i>	<i>Financial Engineering Intern</i>	<i>2023.02-2023.05</i>
<ul style="list-style-type: none">● Assisted analysts in the research and development of quantitative investment strategies, applying LSTM to the entropy pool model to improve portfolio optimization and effectively avoid extreme weight issues.● Successfully employed the MADDPG algorithm for quantitative trading strategy design and tested it on 100 stocks in the actual financial market, with results demonstrating that this method generally outperforms traditional strategies.		
<i>Shenzhen Flying Tiger Investment & Management Co., Ltd.</i>	<i>Innovative Finance Division Intern</i>	<i>2021.07-2021.09</i>
<ul style="list-style-type: none">● Used MySQL database tools to model and analyze the bank's customers based on the customer information and historical business process data in the system to determine the target customer group for a project● Assisted in screening investment projects by using decision tree algorithms. Identified factors that affect project returns and determined portfolios through comparison		

RESEARCH EXPERIENCES

<i>Regulatory Strategy Analysis of E-Commerce Platform Based on Evolutionary Game Theory</i>	<i>2020 - 2021</i>
<ul style="list-style-type: none">● Constructed a three-party dynamic model of merchants, platforms and consumers based on the evolutionary game theory. Used Maple language to process the dynamic equation and then solved the mixed strategy Nash equilibrium (MSNE)● Utilized Python to numerically simulate the stability strategies and behavior evolution rules of three-game player stakeholders, conducting stability and sensitivity analyses, proposing solutions based on the results, and drafting papers in LaTeX.	

COMPETITION EXPERIENCES

<i>Mathematical Modelling Contest</i>	<i>2019 - 2022</i>
Participated in dozens of mathematical modeling competitions, including the following data analysis but not limited to:	
1) Raw Material Ordering and Transportation Strategies for Manufacturing Enterprises:	
<ul style="list-style-type: none">● Used the gray comprehensive evaluation method to score suppliers● Built the ARIMA model and LSTM-FNN neural network to predict the loss rate and supply quantity● Designed greedy Search Algorithm for Satisfactory Solution of Multi-objective Programming	
2) Covid-19 Infectious Disease Models:	
<ul style="list-style-type: none">● By collecting the spread data of the Covid-19 in 2020, established the SIR infectious disease model which accurately described the daily exposure rate of patients and cure rate● Used the gray prediction model to further analyze the impact of the epidemic on the tourism industry	
<i>“CP Group Cup”, 11th Market Research and Analysis Competition</i>	<i>2021.01 - 2021.04</i>
<ul style="list-style-type: none">● Surveyed on the market of cultural and creative products of Henan Museum. A total of 600 electronic questionnaires were distributed within two weeks. Captured more than 20000 text data based on the e-commerce network platform● Conducted word segmentation by using R language to get the word cloud. Through SPSS analysis and Logit model regression, the survey conclusions and feasible suggestions were concluded	

OTHER EXPERIENCES

<i>Mathematical Modelling Association, Zhengzhou University</i>	<i>Vice president</i>	<i>2019.10-2021.05</i>
<ul style="list-style-type: none">● Assisted in hosting the “Fourth Zhengzhou University Mathematical Modelling School Contest”. Participated in the design of competition paper and determined the final award as one of the judge panels● Explained modeling knowledge, programming skills and writing and typesetting of papers to more than 100 mathematical modeling enthusiasts in Zhengzhou University		
<i>“Double Thousand Plan” studying in Canada</i>	<i>Undergraduate Student Representative</i>	<i>2019.07-2019.08</i>
<ul style="list-style-type: none">● Traveled to three universities UBC, Calgary and Simon Fraser in Canada. Exchanged questions and shared ideas about financial mathematics with several professors at the University of Calgary and discussed employment orientation with the dean of the School of Mathematics and Statistics at UBC● Awarded “Star Camper” and was invited by the leaders of the college to be the promoter of “Double Thousand Plan”		

ADDITIONAL INFORMATION

- **Languages:** English(fluent), Mandarin(native)
- **Skills:** Familiar with MS Office、Python、R、MySQL、SPSS、Tableau、Latex

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教育背景

香港大学	人工智能硕士	2022.09-2024.07
郑州大学 (GPA3.4/4.0 校一等奖学金)	金融数学专业	2018.09-2022.06
<ul style="list-style-type: none">主修课程: 计算智能和机器学习、金融数学模型、数据挖掘与文本分析所获奖项: 全国大学生数学建模竞赛省一等奖 (CUMCM); 认证杯数学建模竞赛第一阶段国家级一等奖; 郑州大学数学建模校赛一等奖; 正大杯第十一届市场调查与分析大赛省二等奖; 郑州大学“双千计划”奖学金。		

实习经历

国金证券	金融工程实习生	2023.02-2023.05
<ul style="list-style-type: none">协助分析师开展量化投资策略的研究与开发, 将 LSTM 应用于熵池模型提高投资组合优化的效果, 有效避免权重极值问题成功地运用了 MADDPG 算法进行量化交易策略设计, 并在实际金融市场中对 100 只股票进行了测试, 结果表明该方法通常优于传统策略		
深圳市翼虎投资管理有限公司	创新金融部实习生	2021.07-2021.09
<ul style="list-style-type: none">使用 MySQL 数据库工具, 根据系统中的客户信息和历史业务流程数据, 对银行的客户进行建模分析, 从而确定某项目的目标客户群体使用决策树算法协助筛选投资项目, 找出影响项目回报的因素, 通过比较确定投资组合		

研究经历

基于演化博弈的电商平台监管策略分析	导师: 张李盈	2020 - 2021
<ul style="list-style-type: none">基于演化博弈理论, 构建入驻商家、平台和消费者的三方动态博弈模型, 使用 Maple 语言处理复制动态方程求解混合策略纳什均衡使用 Python 语言进行仿真数值模拟 3 个相关利益主体行为演化稳定策略和规律, 并对博弈主体的策略进行稳定性分析、灵敏度分析, 根据分析结果提出相应的解决建议并通过 Latex 完成论文写作		

比赛经历

数学建模竞赛	2019 - 2022
自 2019 年起连续参加数十次数学建模相关竞赛, 包括但不限于以下类型的数据处理及模型搭建: 1) 制定生产企业原材料的订购与运输策略 <ul style="list-style-type: none">使用灰色综合评价法对供货商评分, 通过搭建 ARIMA 乘积季节模型和 LSTM-FNN 神经网络预测未来转运商损失率和供应商供货量, 使用改进的贪心搜索算法求解多目标规划的满意解	
2) 新冠肺炎疫情传染病相关模型 <ul style="list-style-type: none">通过搜集 2020 年新冠肺炎疫情传播数据, 根据传染病的扩散规律建立 SIR 传染病模型, 对病人日接触率和疾病治愈率进行准确刻画, 并使用灰色预测模型进一步分析疫情影响下我国旅游业的发展情况	
正大杯第十一届市场调查与分析大赛	2021.01-2021.04
<ul style="list-style-type: none">为进行河南省博物院文创产品市场的调查与研究, 在两周内总共发放电子问卷 600 份, 基于电商网络平台抓取文本数据 20000 余条使用 R 语言对数据进行分词统计词云, 通过 SPSS 分析、Logit 模型回归得出调查结论并提出可行性建议	

活动经历

郑州大学校级数学建模协会	副会长	2019.10-2021.05
<ul style="list-style-type: none">协助承办第四届郑州大学数学建模校赛, 参与校赛的出题、论文评选并作为答辩评委之一作为数学建模协会授课人, 多次为郑州大学百余数学建模爱好者讲解建模知识、编程技巧及论文的写作排版		
郑州大学“双千计划”赴加拿大研学	本科学学生代表	2019.07-2019.08
<ul style="list-style-type: none">暑假期间随学院前往加拿大 UBC、卡尔加里及西蒙弗雷泽三所大学进行访问交流, 并在卡尔加里大学与多位教授交流金融数学相关问题, 在 UBC 与数学统计学院院长探讨专业就业导向获得此次研学“明星营员”荣誉, 应学院领导邀请担任“双千计划”介绍宣传人		

其他技能

- 语言: 英语 (雅思 6.5、GRE 327+4), 普通话 (母语)
- 技能: 熟悉使用 MS 办公软件、Python、R 语言、MySQL、SPSS、Tableau、Latex