Fusheng Luo

Email: 18756574729@163.com; Tel: +86-18756574729

EDUCATION

University of Nottingham Ningbo China   **Ningbo, China**
BSc in Mathematics and Applied Mathematics   Sept. 2019 -Jun. 2024

- **Cumulative GPA**: 3.75/4.0 (WES Calculator) **(Advanced GPA 4.0, first-class expected)**
- **Selected Courses**: Mathematical Biology and Medicine, Mathematical Group project, Stochastic Process, Cryptography and Coding, Game theory, Scientific Computation and Numerical Analysis, Mathematical Finance, Vector Calculus, Intro to Scientific Computation, Modelling with Differential Equations, Statistical Models and Methods, Probability Models and Methods, Differential Equations and Fourier Analysis, Calculus, Analytical and Computational Foundations, Applied Mathematics, Linear Mathematics, Probability, Statistics, **Corporate Finance, Business Finance**, Macroeconomics, Intro to Economics
- **Honors & Awards:** Dean's Scholarship (Top 10%, Dec. 2022), Excellent Graduate of Zhejiang Province (Feb. 2024)

University of Nottingham Ningbo China   **Ningbo, China**
Summer Program, Mathematical Economics and Financial Econometrics   Jul. 2021 -Aug. 2021

- **GPA:** 4.0/4.0
- **Selected Courses:** Advanced Calculus, Linear Algebra with MATLAB, Probability Theory, Topics in Econometrics, Programming, Modelling Expectations in Macroeconomics and Finance, Modern Portfolio Theory and Applications, Understanding Financial Market Data, Using Python for Economics, Using R for Financial Econometrics, Introduction to VBA, Risk Management

RESEARCH

Stability Analysis of the SIDARTHE Model Built for Estimating the   **Ningbo, China**
Prevalence of Covid-19 in Italy; Researcher   Nov.2023-Jan.2024

- Studied and provided the global stability analysis of the model in the paper
- Reviewed the SIDARTHE model discussed in the paper *Modelling the COVID-19 epidemic and implementation of population-wide interventions in Italy*, which was published in Nature Medicine Journal
- Familiarized with the Variable Gradient Method (VGM), known from the paper, *The Variable Gradient Method for Generating Liapunov Functions*, published by D.G.SCHULTZ and J.E.GIBSON
- Learned methods like 1). the matrix-theoretic method based on the *Perron eigenvector* to construct Laypunov's function to prove the stability of different equilibrium states in a system and 2). Gradient Vector Method to construct a matrix to prove the global stability of the system

Prediction of Infecting Cancer Based on Logistic Regression Model   **Ningbo, China**
Researcher   Jul. 2023 -Nov. 2023

- Built a logistic Regression model combining an algorithm from Learning Vector Quantitation using R
- Processed datasets from Kaggle, performed feature selection (LVQ) and extracted 14 variables
- Tested the trained logistic models to recognize cancer using the AUC-ROC curve and the confusion matrix
- Successfully produced a model with a 97.87% prediction rate that can give the benign vs. malignant status of the corresponding tumor for the patient based on the data input
- **The paper has been accepted by the 2024 3rd International Conference on Biotechnology, Life Science and Medical Engineering (BLSME 2024) on Dec. 6th, 2023, and will be published to the CPCI database recently.**

Variables Lead to Obesity's Model Constructing   **Ningbo, China**
Researcher   Feb. 2023 -May 2023

- Processed the data of 11 variables with 202 observations each using R 'carData' package to visualize data (scatterplot matrix), 'fit' command to simulate and summarize linear models ('leaps' package)
- Built 11 regression models; applied "Akaike information criterion" (AIC) and "Mallow's Cp" to select the optimal model
- Checked and validated the selected model and performed predictions using methods of residual plot (Pearson residual), QQ plot and expected square prediction error (MSE)

Rental Harmony (a research project on rent partitioning)   **Ningbo, China**
Supervisor: Hamid Reza Daneshpajouh   Feb. 2023 -Jun. 2023

- Explored rent division solutions to ensure each housemate prefers a distinct room with sperner's lemma and triangulation

in multi-dimensions
- Analyzed the research paper "Rental Harmony: Sperner's Lemma in Fair Division" by Francis Edward Su
- Delivered a presentation individually based on the paper's findings for the Weekly Mathematical Seminar for Undergraduate Students

INTERNSHIP

Shanghai Realway Capital Co., Ltd.   **Shanghai, China**
Intern, Financial Department   July. 2023 -Oct. 2023
- Utilized Excel for efficient data compilation and analysis to ensure the accuracy and timeliness of the information
- Performed content extraction and data integration based on multiple data sources, such as bank statements, client companies' account flow and equity interest statements, and created 10+ fund fact sheets for the year 2021-2023

Rural Credit Cooperative of Chicheng County Co., Ltd.   **Zhangjiakou, China**
Assistant to Business Manager, Risk Management Department   May 2023 – Jul. 2023
- Conducted research on the probability of loan defaults for enterprises and built a logistic model using financial data to study the relationship between credit ratings and default probabilities, and compared with default historical data
- Successfully optimized and refined the rating model parameters through testing on 100+ enterprises

University of Nottingham, Student Affairs Center (DCL)   **Ningbo, China**
Technical Support Intern, Student Affairs Center, Technology Development Department   Feb. 2021 – Feb. 2023
- Oversaw the editing of interviews and event-related content, as well as the output of articles for promotions
- Managed and operated the WeChat official account and leveraged data analytical skills to enhance content layout
- Successfully increased user engagement and boosted the conversion rates; accumulated 10,000+ followers, published more than 70 articles, and garnered over 100,000 views on the official account

iFlytek Co., Ltd. (a leading Chinese AI company)   **Hefei, China**
Assistant Researcher, Education BG Group   Jul. 2022 – Sept. 2022
- Conducted data screening on the most extensive educational database in Anhui Province, which comprises a vast collection of test questions spanning from primary to high school levels
- Identified and marked non-compliant questions in the database using preset templates using both the web backend (ZhiXueNet) and Excel, and optimized its AI learning machine
- Utilized MySQL to extract pertinent data, combined with Excel to create comprehensive reports
- Performed data cleaning with the mathematical drawing app "Geometry Drawing Board" to redraw and trace non-compliant data images, ensuring they were uploaded and replaced correctly in the web backend

China Railway Fourth Bureau Fourth Engineering Co., Ltd.   **Huainan, China**
Quality Control Intern, Huainan High-tech Zone Road Engineering Project Team   Jul. 2020 – Sept. 2020
- Assessed the quality of borehole pile concrete based on multiple sets of concrete specimen strength statistics
- Evaluated the compaction quality of road foundation earthwork based on multiple sets of compaction data

LEADERSHIP EXPERIENCE

UNNC Humanities and Social Sciences Student Association   **Ningbo, China**
Head of Technical Support Department   Sept. 2019 – Jun. 2021
- Designed promotional materials such as posters, roll-up banners, and original IP patterns using Adobe Photoshop
- Created and formatted content for the association's social media platforms, and successfully produced 100+ articles with a cumulative view count exceeding 50,000
- Oversaw the layout design for the annual reading publication of the Humanities and Social Sciences Economic Department, and contributed to the production of the 2021 Nottingham Economic Review

UNNC Basketball Association   **Ningbo, China**
Minister of Activities   Sept. 2019 – Jun. 2021
- Completed the work of event planning and coordination, assisted and organized 5+ association activities during his tenure, the number of applicants exceeded 500+, and won the honor of the best association in UNNC (2021)
- Completed event planning and coordination tasks, and organized 5+ association activities
- Managed events with 500+ applicants, and was awarded the "Best Association of the Year" at UNNC in 2021

ADDITIONAL

Language: Native in Chinese, Fluent in English (GRE: 324; Verbal-156, Quant-168, AW-3.5; IELTS: 7.5)

Computer: MS Office, VBA, MATLAB, Python (Matplotlib, pandas, NumPy, matplotlib, SciPy, etc.), R (ggplot2, random forest, etc.), MySQL, ADOBE Photoshop, Premiere, AE (graphic editing software)

GitHub account: **RomeoIsFushengLuo**