

# Liangxiao Li

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## EDUCATION

University of Cambridge, Cambridge, UK	10/2024-06/2025
MPhil in Data Intensive Science	
University of Nottingham (UNUK), Nottingham, UK	09/2022-06/2024
University of Nottingham Ningbo China (UNNC), Ningbo, Zhejiang, China	09/2020-06/2022
Bachelor of Science with Honours in Statistics	Overall GPA: 87/100 (First Class)

## ACADEMIC HONORS & AWARDS

(1) 2024 Excellent Graduates	(2024, Top 1%)
(2) 2023, 2024 UoN School Achievement prize for Mathematics	(2023/2024, Top 1%)
(3) President's Scholarship for Statistics	(2022, Top 1%)
(4) Zhejiang Provincial Scholarship	(2021, Top 1%)
(5) Dean's Scholarship for Statistics	(2021, Top 10%)
(6) The Best Performer of the Year	(2022, Rank 1 <sup>st</sup> in academic)
(7) 2022/2023 UNNC award for outstanding students	(2022/2023, Top 2%)
(8) Nottingham Advantage Award	(2022)
(9) The Best Performer in Data Scholarship Project	(2022)

## WORK EXPERIENCE

1) Barclays (Offer received for 2024 summer)	06/2024 – 08/2024
Chief Operation Office Technology Analyst – Still in Progress	Northampton, UK
<ul style="list-style-type: none"><li>Participated in internal company training program to learn Barclays card service, understand corporate culture.</li><li>Performed <b>Sentiment Analysis</b> on customer data using <b>Python</b> in <b>VScode</b> for risk management. Constructed GLM model with sentiment score, offering insight on potential risk for future prevention.</li><li>Connected with Barclays India site engineers for intranet <b>Tableau</b> site construction, presented it to higher portfolios.</li></ul>	
2) Shenzhen Bay Laboratory	07/2023 – 09/2023
Research Assistant (Data analyst), Biophysics department	Shenzhen, Guangdong, China
<ul style="list-style-type: none"><li>Spearheaded the analysis of COVID-19 Spike Protein mutation patterns using data extracted from the PDB database</li><li>Employed <b>R</b> for comprehensive data preprocessing, including log transformation, normalization, and capping</li><li>Leveraged <b>SAS</b> for in-depth correlation studies, linking residue attributes and uncertainty to mutation frequencies</li><li>Applied <b>Python</b> to implement machine learning <b>Clustering</b> (K-means, DBscan) for mutation hotspots detection, validated through permutation-based tests. Self-initiated learning and application of Gaussian Process for <b>Predictive</b> modeling, with emphasis on overfitting prevention</li></ul>	
3) Meixxx Digital Twin Company	07/2022 - 08/2022
Data analyst, Poolth Data department	Ningbo, Zhejiang, China
<ul style="list-style-type: none"><li>Led the development of a CRM system using Smartdata and SQL for streamlined data management</li><li>Managed daily databases with Navicat and Dbeaver, rectifying data inaccuracies and equipment issues</li><li>Analyzed electric meter data for the digital twin project, providing insights on hospital consumption patterns</li><li>Assisted in crafting the First Hospital's digital twin database, focusing on electric meter data and room allocations.</li><li>Established digital twin APIs using Smartdata and Postman, enhancing system integration</li></ul>	
4) Meng XingHe International Trading Company	07/2021 - 08/2021
Business Analyst	Ningbo, Zhejiang, China
<ul style="list-style-type: none"><li>Cleaned 100+ products data from e-commerce platforms such as Alibaba Express, driving product optimization</li><li>Enhanced product visibility through strategic digital marketing techniques, utilizing tools such as Google Trend</li><li>Continually monitored product performance metrics, utilizing KPIs like sales volume to fine-tune strategies</li></ul>	

## RESEARCH EXPERIENCE

1) Bank Credit-Scoring model based on XGB Machine Learning	01/2023 - 03/2023
Mathematics Group Project, Supervisor: Prof. Theodore Kypraios	
<ul style="list-style-type: none"><li>Compared different models (Adaboost and XGB) for identifying individual with good credit and bad credit.</li><li>Performed missing data imputation based on mean/median imputation and XGB imputation.</li></ul>	

- Achieved >90% Recall and accuracy, meaning a successful model for rejecting individual for bad loans

## **2) Machine Learning Research on Document Text Recognition using OCR Techniques** 06/2022 – 08/2022

Individual UNNC Summer Research, Supervisor: Dr. Boon Giin Lee

- Implemented Deep learning algorithm Auto-encoder for image denoising on Google Colab, performed hyperparameter tuning, and successfully converted ‘noisy’ invoices into grayscale images for OCR recognition
- Managed the project using Git-Kraken after acquiring experience with GitHub, ensuring streamlined version control

## **3) World University Analysis** 03/2022 – 05/2022

Individual Data Scholarship Project, Awarded “Best Performer”, Supervisor: Research Librarian Tiffany Yu

- Conducted advanced data visualization on World University Dataset using Tableau
- Preprocessed and analyzed dataset attributes, applied Time series visualization to demonstrate covariate variations, emphasizing relationships between key features to draw meaningful insights on university distribution etc.
- Built interactive Tableau dashboards for visual data representation

## **4) A Comprehensive Study on Daily Portfolio Strategy** 11/2021 – 02/2022

Group Project Team Leader, Honorable Mention, 2022 Mathematical Contest In Modeling, Supervisor: Dr. Donglei Sun

- Established optimized daily transaction strategy based on past Bitcoin price trend
- Integrated SARIMAX Prediction, Markowitz Portfolio Optimization, and Entropy-TOPSIS evaluation model
- Analyzed impact of transaction cost on trading strategy, achieving an 18.17% annual ROI from Bitcoin investments
- Allocated tasks for team member based on their strength and weakness, organized group discussions for innovation

## **EXTRACURRICULAR ACTIVITIES**

### **1) Senior Student Representative, School of Mathematical Science** 09/2023 - Present

- Co-Chaired Student Staff Forum meeting with UNUK Professor Daniel Cavey
- Participated in the EDI(Equality, Diversity and Inclusion) as an invited student representative
- The first student invited to join the Teaching and Learning Board for school of Mathematical Science

### **2) Learning Community Representative, Faculty of Science and Engineering (FoSE)** 10/2020 - 06/2022

- Collected information from students, analyzed data, and reported to UNNC officers
- Served as student representative for FoSE in Learning Community Forum

### **3) Event Host & MC, SESA(Science and Engineering Student association) Events** 10/2020 - 12/2020

- Led and participated in organizing activities, served as the MC for 4 activities, including school-level events such as High-Flyer Scheme, UNNC souvenir design contest etc.

### **4) Champion, Speak Out for Engineering Contest (SOFEC)** 11/2020 - 12/2021

- Participated in an English speech contest and won Champion of Ningbo Area, Runner-up of all China

### **5) Club Member and Contest Champion, Nottingham Debating Union China (NDUC)** 10/2020 - 1/2021

- Participated in weekly debates organized by NDUC
- Won First place in the Freshman Debate Contest as a 2-member team

### **6) Market Researcher, 2021 P&G CEO Challenge** 1/2021 - 2/2021

- Worked in a team of four, completed a product promotion plan, and recorded an introduction video within one month
- Conducted market research and improvement plan for First aid beauty supply chain

## **PROFESSIONAL SKILLS**

- **Language:** English & Chinese
- **Technical Skills:** Python, R, SAS, Tableau, SQL, MATLAB, LaTeX (Overleaf), GitHub, Hadoop & Spark
- **Machine/Deep Learning:** Linear Regression, Clustering (DBscan, K-mean), Gaussian process, best subset regression, Ridge regression, Auto-encoder, NLP, XGB, PCA, CCA, MDS, Data imputation
- **Maths:** Linear Algebra, Calculus, Applied mathematics, Pure maths, Mathematical analysis, Mathematical modeling, Scientific computation, complex analysis, Statistics, Probability, non-parametric statistics
- **Soft Skills:** Good team player, Adaptable learner, efficacious time manager and organizer, Goal oriented

## **PROFESSIONAL DEVELOPMENT**

**Oxford Winter School:** Artificial Intelligence and Machine Learning (Grade A)

**Online courses:** Introduction to big data with Spark and Hadoop(IBM), Machine Learning (Stanford), SQL for Data Science (University of California, Davis), Data Structure and Algorithm Specialization (University of California San Diego), Introduction to R (Data Camp), Understanding Machine Learning (Data Camp)