Mingyu Mao

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EDUCATION

Queen Mary University of London | Mathematics September 2022 - Present

- Courses covered Advanced Algebra, Mathematical Analysis, Calculus, Data Analysis, Probability Theory and Mathematical Statistics, Linear Statistical Models, Linear Programming Techniques, Computer Usage
- All courses graded A (top 15% of the class)

PROJECT EXPERIENCE

Data Analysis Using R Studio

Leveraged online resources to collect and integrate data on product iterations and revenue for GAME FREAK projects, using visualizations for comparative analysis. Built statistical models and wrote detailed analysis reports, providing forecasts and purchasing recommendations for the next generation of products.

- Employed AI datasets to evaluate training data size and knowledge test results for various AI systems, particularly for ChatGPT 4.0. Conducted model diagnostics and generated Expanded ANOVA charts, offering suggestions on training directions and database collection to enhance data processing efficiency and user response relevance.
- Utilized new modules from libraries to analyze historical exchange rates of multiple countries. Created 3D and ANOVA charts and established models to predict current inflation trends, providing currency usage advice based on economic insights.
- Analyzed US election data and created visualizations to predict the probability of candidates in upcoming elections.
- With Dota2's online players data in the past 13 years as the basic data of prophet time series, using Meta's Prophet forecasting system to make the predictions.

Data Handling and Visualization Using Python

Every step included clear and independent comments for easy reproduction

- Created arc diagrams of matchings, crossings, and nestings.
  Practiced extensively with the Our World In Data database, proficiently using Excel for data reorganization and filtering.
- Employed Numpy for data organization and filtering, defined and applied multiple loops to generate new data combinations as a foundation for plotting, eliminating errors or redundant data that could negatively impact results.
- Used Matplotlib to create arc diagrams and two-dimensional histograms, correcting and refining based on actual outcomes to ensure final code perfectly visualized data flow.
- Expanded code applications by making simple modifications or changing data, making the original code applicable across more fields. Processed and reorganized data to identify gaps and list all possibilities, counted pairings, and provided a comprehensive analysis report.

PROFESSIONAL SKILLS

- R Studio: Data plotting, statistical calculation
- Python: Numpy multi-dimensional array processing, Pandas data cleaning and analysis, Matplotlib data visualization
- Excel: Visualization, VLOOKUP, SUMIFS, COUNT functions
- Office Suite: PowerPoint presentations, professional Word documents
- Languages: Chinese, English (IELTS)
- Certifications: Microsoft Office Specialist (MOS) Excel Certification

SELF-ASSESSMENT

- Strong ability to learn and understand, quickly mastering and applying new professional tools. Good spatial imagination and ability to handle emergencies.
- Positive and optimistic personality with a healthy mindset, strong stress resistance, and a clear future plan, working diligently toward it.
- Honest and enthusiastic, skilled in team communication and resource coordination, committed to advancing workflows smoothly.
- Proficient in advanced Excel operations and capable of writing and annotating code efficiently.