Yulun Wu

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EDUCATION

University of Pennsylvania | *Master of Science in Engineering in System Engineering* 08/2024 – 05/2026 (Expected)
University of Nottingham | *BSc Hons Mathematics with Applied Mathematics* 09/2020 – 07/2024

- Overall GPA: **3.90**/4.00 | First Class | Provost's Scholarship (06/2021)

SKILLS

Analytic Skills: Statistical Modeling, Data Modeling, Linear Regression, Supervised/Unsupervised Modeling, Data Visualization, Data Cleaning, Sample Size and Power Calculation, Data Engineering, Experiment Design, A/B Testing, High Dimensional Model Selection, Time Series Analysis, Data Mining, Differential Equations, Probability Models and Methods, Fourier Analysis, Statistical Inference, Optimization, Multivariate Analysis
Software Skills*:* C, C++, Python, MATLAB, R, SQL, PowerBI, Tableau, Spark, Hadoop, Microsoft Office, Jupyter Notebook

PROFESSIONAL EXPERIENCES

Novo Nordisk (China) Pharmaceuticals Co., Ltd. | *Data Analyst Intern* | Beijing, China 06/2023 – 09/2023

- Collaborated with Microsoft China on a company-wide database migration project, consolidating five databases into one. Analyzed data flow, optimized SQL queries for enhanced efficiency, and contributed to the development of over 20 user requirement specifications
- Leveraged Python and statistical techniques to process and analyze historical sales promotion data for pharmaceuticals. Developed time series models to provide insights for optimizing future promotions and recommending budget allocations

Central Institute of Mental Health | *Data Analyst Intern* | Mannheim, Germany 01/2023 – 05/2023

- Explored neurophysiological activity under stress conditions using a neuropsychological paradigm and combining functional MRI and heart rate signal (in collaboration with the Max Planck Institute of Psychiatry)
- Analyzed fMRI-BOLD and photoplethysmogram signals respectively utilizing generalized linear models (GLM) and wabp algorithm in MATLAB and found brain regions' interaction with the autonomic nervous system under stress
- Presented research results in an Academic Seminar at Heidelberg University to 20 scholars and researchers and prepared a poster for an international conference; Expect to publish the research findings in high-impact international journals

PROJECTS & RESEARCH EXPERIENCES

Customer Churn Analysis 06/2024 – 08/2024

- Led a comprehensive customer churn analysis using Python, analyzing data from over 7,000 customer records to identify key factors influencing churn rates
- Applied the SMOTE method to increase sample size and developed multiple classification models (Logistic Regression, Random Forest, XGBoost) to predict potential customer churn. Achieved an accuracy of 0.9 using XGBoost and created SHAP value charts to explain the model
- Designed and implemented A/B testing to validate data-driven strategies for reducing customer churn, comparing pre- and post-intervention churn rates to measure the effectiveness of the campaign

Dimension Reduction Analysis 04/2023 – 05/2023

- Implemented PCA and CAE techniques for data compression and decompression on 48 videos with different initial conditions related to Reduced Order Modeling & Video Prediction
- Compared the reconstruction accuracy of PCA and CAE against various dimensions of the reduced space and found better accuracy for larger dimensions using CAE and for smaller dimensions using PCA
- Developed a sequence-to-sequence predictive model (LSTM) for four timesteps in the reduced space and achieved a 92% accuracy rate in decoding predicted results in the full space

Certification

Scrum Fundamentals Certified (SFC) – SCRUMstudy 04/2024
Microsoft Certified: Power BI Data Analyst Associate – Microsoft 11/2023 – 11/2024