

Hongxuan Zhao

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EDUCATION

University of Chicago | Master of Science in Data Science 2023.08 - 2024.12
The Ohio State University, Columbus | Bachelor of Chemistry & Applied Mathematics 2019.08 - 2023.05
GPA: 3.95/4.0 | Personal Honor: 2019 - 2023 Dean's List
Core Curriculum: Introduction to Analysis, Quantitative Neuroscience, Spreadsheets and Databases, Introduction to Mathematical Biology, Programming Python, Programming R, SQL/NoSQL, Data Engineering Platforms

INTERNSHIP EXPERIENCE

Ipsos Consulting Company | Healthcare Market Consulting Intern Shanghai 2022.05-2022.08

- Provided feasibility verification and product marketing decisions for biologics companies
- Designed questionnaires for doctors who specialize in rheumatoid diseases, screened on the characteristics of rheumatoid patients, doctors' usage of biological treatments, medication considerations, and the current market demand for biological agents; conducted quantitative research and completed 2 questionnaires with each totaling 50+ questions, and collected 500+ responses
- Collected information for 10 different client companies that produce rheumatoid arthritis-related biologics through industry research reports, expert interviews, company internal databases and other channels; analyzed sales areas and market shares in the past 5 years, and produced market research report for executive operations
- Utilized R's multiple regression and cluster analysis to distinguish and filter datasets; screened key data indicators to verify the feasibility of the target customer's decisions

ByteDance | Data Analysis Intern Beijing 2021.07 - 2021.08

- Helped a pet monitor company completed their product selection for business expansion into Amazon through data analysis
- Performed data cleaning on 300+ documents using Python and SQL, with focuses on pet monitor's price, sales volume, product features, target audience, and sales scenarios; completed data visualization
- Completed 2000+ lines of code using Pandas and NumPy to help brands select their most suitable products for Amazon marketing
- Produced executive reports to display the analysis logic of the team and the product selection basis for business decisions

Wall Street Tequila Career | Market Development Intern Shanghai 2021.09 - 2021.11

- Organized marketing activities to attract new customers to purchase the company's career consulting services
- Arranged 5 publicity activities to introduce the company's business philosophy and products, with a total of 200+ client present; organized 3 interview activities, invited guests to share their experiences, with an average of 50+ client parties per event
- Established 8 interactive online communities with more than 100 group members; led groups discussion, shared market information, and maintained high connectivity within the group

RESEARCH & PROJECT EXPERIENCE

New Drug Product Development Project for Pharmaceutical Company 2023.06 - 2023.08

- Understood relevant literature, determined the theoretical basis and indications of the drug; contacted field experts, scholars and institutions to form the research team; screened patients who are willing to participate in the trial, established ethics committee, drafted and signed an agreement with test participants; prepared application materials to create project schedule
- Formulated strict budget review in order to improve the efficiency and quality of drug clinical research; initiated supervision mechanisms and data management plans, adopted data analysis and follow-up visits; ensured trial progress and reduced safety risks
- Maintained close communication with regulators and internal teams as a sponsor, established an information sharing mechanism, and promoted regulatory quality; selected appropriate analysis models to develop schedules and organized team evaluations Efficacy and safety of drugs, and publish the results on medical academic platforms; evaluate the patient's condition and provided treatment courses based on pathological characteristics and clinical manifestations

Dynamic Math Model of Neurons Involved in Parkinson's Disease 2022.12 - 2023.05

- Simulated the relationship between Parkinson's disease and depression through mathematical modeling; used XPPAUT to simulate the lesion response in neurons and completed result visualization
- Simulated the dynamic interaction between the subthalamic nucleus (STN) and the globus pallidus lateral part (GPe) based on the revised Hodgkin-Huxley model
- Used the parameter set provided by doctors to simulate the interaction and change pattern of STN and GPe in patients with Parkinson's disease
- Utilized XPPAUT and Python to draw various types of neuron behavior diagrams

WebMO Software Molecular Structure Calculation in EAS Chemical Reactions 2022.12 - 2023.05

- Used WebMO to calculate the molecular structures of the compounds participating in the EAS reaction, analyzed the impact of different functional groups and their orientations on EAS reaction speed; analyzed the possible reaction mechanisms by comparing the energies of the starting reactants, intermediates, and products

PROFESSIONAL SKILLS

Language: English, Chinese (native)

Professional Capabilities: Python, SQL, MATLAB, R, Microsoft Office, Tableau

Hobbies: Traveling, Workout