Jingyuan Liu

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EDUCATION

University of International Business and Economics, School of Information Technology & Management   Beijing, China
Bachelor of Engineering: Data Science and Big Data Technology, June 2023
Cumulative GPA: 3.41/4.00
Relevant Coursework: C++ Programming (4.0), Data Structure (3.7), JAVA Programming (3.7), Python and Big Data Analysis (4.0), Data Visualization and Applications (4.0), Information Retrieval and Data Processing (3.7)

PROJECTS

NLP-centric MultiModal Biological Experiment Assistant,   September 2023 – Present
Institute of Automation, Chinese Academy of Sciences, Research Assistant

- Customized a protocol generation system with LangChain framework, Chatchat model and used Chatglm-6b model and bge-reranker-large embedding model after assessment.
- Crafted a JSON recognizer that maps 204 actions to tasks based on real-world protocols, featuring a duration and condition detection function. Utilized Few-Shot learning to design prompts, enhancing control over the text output direction.
- Constructed a Knowledge Base Question Answering System containing over 20,000 protocols sourced through web crawling. Transformed these files into markdown format for better handling, and leveraged faiss for vectorization. Additionally, incorporated keyword embedding to significantly improve the system's recall rate.

Analysis of Virtual Anchor Profitability based on System Dynamics, UIBE, Researcher   November 2022 - May 2023

- Scraped 184,622 data covering live broadcasts, revenue, and videos of vtubers over past three years using Beautifulsoup.
- Implemented an iterative refinement process, selectively filtering out variables with p-values exceeding 0.05 while analyzing the correlation between various characteristics and virtual monetization capabilities with OLS regression.
- Established a dynamic virtual liver profit estimating system using Vensim, with errors not surpassing 1%.

Prediction of Weibo Trends based on the Random Forest, UIBE, Researcher   November 2021 - December 2021

- Analyzed dataset labels using Spearman correlation coefficients and visualized them using a heatmap. Chose labels with a correlation coefficient greater than 0.01 related to the 'hot' label.
- Trained a model using the random forest method on a dataset of over 31,700 Weibo entries. Fine-tuned n_estimators by analyzing the learning curve, leading to an improvement in the cross-validation score from 0.75 to 0.81

INTERNSHIP

Big Data Development Intern, *R&D Department,* **Snowball**   Feburary 2023 - May 2023

- Completed testing of 10 data warehouse tables and 86 sensitive fields, identified and fixed 4 problematic tables using SQL.
- Completed review and inspection of 211 ODS tables and 681 reusable tables, identifying 2 unnecessary dependencies and over a hundred instances of duplicate logic.

HRIS Intern, *Team of HRIS and Data Analytics*, **Bianlifeng**   June 2021 - December 2021

- Created 5 RPA (Robotic Process Automation) scripts using UIBOT for web data crawling and performing classification calculations, resulting in a 95% increase in efficiency. Notably, the 'DiDi' project script is capable of autonomously fetching over 8,400 entries of system employee information and exporting the necessary data.
- Utilized SQL to extract data from the warehouse, successfully meeting monthly data requirements of over 10 departments.

LEADERSHIP & VOLUNTEER EXPERIENCE

UIBE School Debate Team, Team Captain & Coach   September 2021 - Present

- Led the team to achievements including Third Place in Asia Mandarin Debate Tournament 2020, Runner-up in Beijing Debate Competition, Top Eight in the World Traditional Chinese Medicine Cup, and Champion of Keyan Cup.
- Managed internal competitions and conducted training seminars.

Future Science Prize Week of 2019, Volunteer   November 2019

- Managed guest reception and guidance duties, and acted as the explainer for math-related artworks at the 'Wu Yan - Science and Art Perspectives' exhibition.

SKILLS

Programming Languages: Python, Java, C++, SQL, MATLAB, R, RPA
Software: Tableau**,** Power BI, Gephi, Vensim, UIBOT