LIU Ziang

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SKILLS PROFILE

- 2+ years of working experience in a game design company.
- Case Study Experience in Data Analysis, Data Science.
- Proficient programming skills in Python, MATLAB, SQL, C, Arduino, Nuke, R.
- Knowledge of deep learning, quantum computing, signal and video processing, LLMs.
- Completed the Google Data Analytics Professional Certificate
- Excellent problem-solving skills including analyzing and solving large problems.
- 2 years of tutoring and volunteer teaching experience.
- Fluent in English, native in Mandarin.

EDUCATION

Trinity College Dublin, Ireland *2024.09 -*

MSc. In Electrical Information Engineering (Computational Engineering Strand)

University of Edinburgh, University of Glasgow (Joint), UK *2020.09 - 2021.06*
MSc. in Sensor and Imaging System Grade: Merit

Beijing Institute of Technology, China *2016.09 - 2020.06*
BS. in Opto-electronics Information Science & Engineering GPA: 85/100

Australian National University, Australia *2019.06 - 2019.07*
Summer Workshop

RESEARCH EXPERIENCE

Sentiment analysis with LLMs for predicting trends, *MSc. Project, TCD* *2024.09 -*

- Conduct in-depth research on the architecture and principles of Large Language Models.
- Prepare, clean and process the bitcoin prices and GDELT news data.
- Retrain and fine-tune the FinBERT model on a balanced dataset.
- Apply the retrained model on the GDELT dataset to extract sentiments.
- Analyze and aggregate the results, measure the correlation.
- Optimize the model parameters to find the optimal solution.
- Build a trading signal based on sentiment and conduct backtesting.
- Evaluate the performance quantitatively, visualize the result.

Laser Harp, *MSc. Project, The University of Edinburgh* *2021.03 – 2021.06*

- Provided an exciting, portable, reasonably priced, eye-catching, and interactive laser harp to encourage student to engage in STEM subjects.
- Utilized Multisim to design circuits for controlling the laser harp keys, implemented the main playing mode and built the main framework and game logic using Python.
- Created a user-friendly menu with settings to enhance the user experience and implemented Gesture Recognition for menu navigation and harp control.
- Applied Sonic pi to achieve multiple instrument and sound outputs and improved sound delay and incorporate basic gesture recognition functionality.

Bellabeat Case Study, *Google Data Analytics Capstone Project, Coursera* *2025.01 – 2025.05*

- Defined the business task based on stakeholder requirements: "How consumers are using non-Bellabeat smart devices" and "How these trends can inform Bellabeat's marketing strategy."
- Prepared relevant datasets including physical activity, physiological metrics, and sleep monitoring data from non-Bellabeat smart device users.
- Used SQL to validate data integrity, convert data types, and clean datasets by removing duplicates, errors, and null values.
- Used Tableau to conduct data analysis and behavioral pattern discovery. Visualizing the results such as average daily activity levels, peak exercise times, and sleeping quality trends.
- Translated analytical findings into actionable business insights and marketing recommendations for Bellabeat, and presented results using PowerPoint presentation.

WORK EXPERIENCE

Magic Tavern Co. Ltd. Beijing Branch, Level Designer *2022.05 - 2024.08*

- Responsible for designing game levels for game release, organizing and writing documentation related to game level systems, and assisting in formulating game rules.
- Conduct research on popular games in the market, analyze costumer needs and evaluate the strengths and weaknesses of competitors.
- Conduct data analysis to screen out problematic levels for modification based on online data.
- Modify and optimized levels and the gaming experience based on data analysis, as well as tasks such as level selection, uploading, and verification during level version iterations.
- Explore new directions for game levels, established testing groups, and attempted to find ways to improve gameplay.