

LIU Ziang

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Location: Dublin, Ireland

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.
- 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.

Thermal Analysis of Optical System of Star Sensor, BS. Project, BIT

2020.02 – 2020.06

- Evaluated the impact of extreme temperature conditions on the imaging quality of a star sensor by conducting thermal environment simulation analysis.
- Designed the mechanical structure of the star sensor system using Solidworks, and then imported into finite element software for further analysis.
- Fed back the thermal deformation to the optical system, performed Zernike polynomial fitting on the deformed surface using MATLAB and then imported into Zemax for imaging analysis.
- Revealed that at 60 degree, RMS and GEO radius, and aberration of the deformed system exceeded optical system requirements and MTF curve smoothness decreased and the change in centroid height was minimal.

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.