

Liu Ziang

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Career Objective: Data Analyst, Data Scientist | Location: Dublin, Ireland | Github: https://github.com/Zephyr417

Skills Set

Tools: SQL, Python (Pandas, NumPy, Scikit-learn, TensorFlow, PyTorch), Excel, Tableau, Excel, R, Hugging Face  
Core skills: Data Cleaning, Data Visualization, Predictive Modeling, A/B Testing, Deep Learning, NLP, LLM

Work Experience

- Magic Tavern Co. Ltd. Beijing Branch      Level Designer      Mar 2022 - Aug 2024
- Level Design: Engineered and iterated 25+ game levels weekly using data-driven design pipelines.
  - Player Analysis: Analyzed in-game metrics to identify player behavior and provide data-driven insights to improve retention.
  - Data Screening: Collected and interpreted online gameplay data to evaluate and prioritize levels for optimization.
  - Team Collaboration: Worked with design and operations teams to implement changes and improve user experience.
  - A/B Testing: Designed experiments on level designs and rule sets, using results to validate changes and guide updates.
  - Requirement Management: Drafted technical documents, proposed and refined requirements, and managed implementation.
- Beijing Institute of Technology      Research Assistant      Jun 2018 - Jun 2019
- Data Analysis: Analyzed large-scale MURA medical imaging dataset to support early detection of bone and joint lesions.
  - Data Preparation: Extracted, cleaned image data, applying preprocessing techniques to improve quality and consistency.
  - Model Implementation: Implemented U-Net in TensorFlow to generate quantitative features from radiographic images.
  - Evaluation: Assessed model using accuracy, precision, and IoU, summarizing trends to identify strengths and weaknesses.

Research Experience

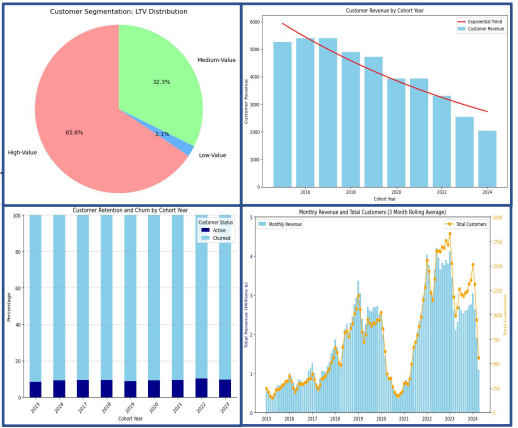
- Sentiment analysis with LLMs for predicting Bitcoin trends      Sep 2024 - Jul 2025
- Industry Collaboration: Participated in an industry-academic project with BlackRock, applying research to practice.
  - LLM Research: Conducted in-depth study of architecture and principles of large language models.
  - Data Preparation: Prepared, cleaned, and processed Bitcoin prices and GDELT news datasets for analysis.
  - Model Fine-Tuning: Retrained and fine-tuned FinBERT on a balanced dataset for sentiment extraction.
  - Data Analysis: Aggregated results and measured correlations between sentiment and market data.
  - Trading Signal Development: Optimized model parameters, built trading signals, and conducted backtesting.
  - Performance Evaluation: Quantitatively evaluated model performance and visualized results.
- Laser Harp      Mar 2021 - Jun 2021
- STEM Engagement Project: Built a portable, interactive laser harp to engage students in STEM learning.
  - Circuit Design: Designed circuits in Multisim to control harp keys and main playing mode.
  - Programming: Developed game logic and framework using Python for the laser harp.
  - UI & Gesture Control: Created a user-friendly menu with gesture-controlled navigation and settings.
  - Audio Integration: Used Sonic Pi to generate instruments, reduce sound delay, and integrate gestures.
- Thermal analysis of optical system of star sensor      Feb 2020 - Jun 2020
- Thermal Analysis: Evaluated the impact of extreme temperatures on star sensor imaging via simulation.
  - Mechanical Design: Modeled the star sensor structure in SolidWorks and performed finite element analysis.
  - Optical Feedback: Applied thermal deformation to the system, fitting surfaces with Zernike polynomials in Zemax.
  - Evaluation: Identified that at 60°C, RMS, GEO radii, and aberrations exceeded tolerances, reducing imaging quality.

Education Experience

Trinity College Dublin	MSc. in Computational Engineering	Sep 2024 - Sep 2025
University of Edinburgh	MSc. in Sensor and Imaging Systems	Sep 2020 - Sep 2021
Beijing Institute of Technology	BS. in Opto-electronics Information and Engineering	Sep 2016 - Sep 2020

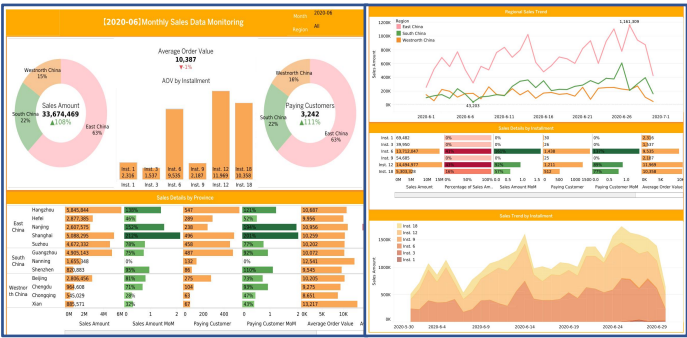
Customers Behavior Analysis

- **Customer Segmentation:** Categorized customers into different segments by lifetime value using SQL to guide retention strategies.
- **Cohort Analysis:** Analyzed revenue and customer trends across cohorts by first purchase year; highlighted retention challenges and opportunities for targeted engagement.
- **Retention & Churn Analysis:** Calculated active vs. churned customers per cohort; recommended onboarding improvements, loyalty initiatives, and re-engagement campaigns to boost long-term retention.



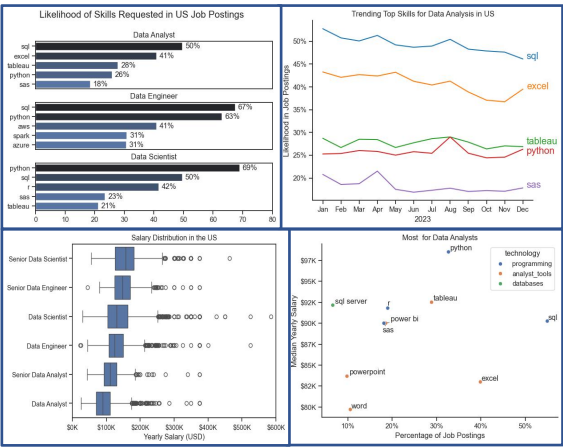
Sales Performance Analysis

- **Sales Dashboard:** Built an interactive Tableau dashboard to track monthly KPIs, trends, and support business decision-making.
- **Data Analysis:** Cleaned and combined multi-month sales data, performed regional and installment plan analysis to identify performance patterns.
- **Insights & Recommendations:** Highlighted revenue growth, declining AOV, and high-impact installment plans; suggested targeted strategies for retention and sales improvement.



Data Job Market Analysis

- **Data Jobs Market Analysis:** Analyzed data analyst job market using Python. Explored top-paying, in-demand skills, and career trends.
- **Skills & Salary Analysis:** Identified most demanded skills (Python, SQL, Excel) and highest-paying specialized tools (Hugging Face, mxnet, Bitbucket) to guide career development.
- **Trend & Optimization Insights:** Evaluated skill demand trends, salary distribution, and optimal skill combinations to maximize employability and earning potential.



Bellabeat Google Analytics Case Study

- **Bellabeat Usage Analysis:** Analyzed non-Bellabeat smart device data to understand user activity, sleep patterns, and engagement trends.
- **Behavior Insights:** Identified peak activity times, preferred intensity levels, distance-calorie relationship, and variations in sleep duration and efficiency.
- **Marketing Recommendations:** Suggested weekend wellness challenges, targeted fitness content, calorie tracking, timed motivational messages, and monthly sleep improvement campaigns to boost engagement.

