

Yuyang Zhou

Tel: +44 7496 387220

Email: casperz0508@gmail.com

EDUCATIONAL EXPERIENCE:

The University of Edinburgh (UoE)

09/2023-09/2024

Degree: M. Sc. in High Performance Computing with Data Science

Final Grade: Merit

Core Modules:

High Performance Data Analytics, Fundamentals of Data Management, Parallel Design Pattern, Threaded Programming, Design and Analysis of Parallel Algorithms

Beijing Forestry University (BJFU)

09/2019-06/2023

Degree: B. Mgt. in Information Management and Information System

Final Grade: 2:1 Honours

Core Modules:

Python Application, C Programming, R Data Processing Base, Data Structure, Probability Theory and Mathematical Statics, Exploratory Data Analysis

COMPUTER SKILLS:

Programming Languages: Python, C, HTML, JavaScript | **Data & Analytics:** Pandas, NumPy, R | **ML & DL:** LLM fine-tuning, sklearn, PyTorch | **Databases:** SQL, MongoDB | **Big Data:** Spark, Hadoop | **Web Frameworks:** Vue.js, Next.js, Express.js, FastAPI, Django | **Other Tools:** Linux, Kubernetes, GitLab

WORK EXPERIENCE:

University of Portsmouth, United Kingdom

Data Mining and Analysis Research Assistant, 09/2024-12/2024

- Developed a Python-based web scraping pipeline to legally extract over 20,000 annual reports from Shenzhen and Shanghai stock exchanges (2014-2024), achieving 90% accuracy in extracting governance and environmental terms with spaCy and custom NLP.
- Designed a MySQL database with advanced indexing, enhancing data retrieval speed by 45% for large-scale studies.
- Used TF-IDF, LDA, and Logistic Regression (F1 score: 0.86) to analyse corporate governance and environmental performance, and built interactive dashboards with Plotly and Dash for trend visualisation.

BigData Dev Department, MobvistaTechnology Co.,LTD.

Front-end Development Intern, 05/2022-09/2022

- Explored Liquid language syntax and built a basic development framework with Ruby and Devkit, addressing cross-domain data requests and implementing tracking points to monitor user behaviour.
- Analysed user behaviour data with collaborative filtering to improve product recommendations and user engagement.
- Developed a backend management interface with interactive data visualisations, collaborating with data analysts and product managers to enhance data accuracy.

PROJECT EXPERIENCE:

HPC User Support Chatbot Development

Developer, 06/2024

- Analysed and pre-processed data using Python pandas, fine-tuning LLama2-chat-7b and LLama3-8b models with QLoRA and LoRA to enhance adaptability and performance.
- Built a knowledge base with RAG technology, using PyMuPDF, spaCy, and SBERT for sentence embeddings, and FAISS indexing for efficient retrieval.
- Integrated VADER sentiment analysis for emotional response adjustment and deployed the chatbot on Discord to improve support accessibility.

Paper Analysis Software Development Project

Project Leader, 09/2023-04/2024

- Designed and implemented a text analysis system for academic papers using Next.js and Fast API, with data extraction, cleaning (Python, pandas), and storage in MongoDB.
- Developed clustering, keyword extraction, sentiment analysis, and topic modelling algorithms to analyse citation networks and author relationships, using NLP techniques.
- Integrated dynamic visualisations (graphs, charts, network diagrams) and managed the project with tools like Discord, regular meetings, risk analysis, and clear deadlines to ensure timely and high-quality delivery.

Development of Face Recognition Check-in System

Developer, 11/2022-12/2022

- Developed a backend server using Node.js with Express.js, handling user authentication, session management, and RESTful API integration.
- Designed and implemented a SQLite3 database, creating tables for user and admin data, and optimized queries for fast data retrieval.
- Built the front-end with LayuiMini, using HTML, CSS, and JavaScript, and implemented Ajax for partial page refresh to enable real-time updates and a responsive interface.

Citi Financial Innovation Project: ESG Data Visualisation Platform Development

Core Developer, 09/2022-10/2022

- Built the front-end using Vue.js with efficient component-based architecture, optimizing rendering speed and user experience.
- Developed a scalable cloud database with MySQL for storing, classifying, and managing ESG data from Asian economies.
- Integrated ESG data and created interactive visualisations using ECharts and REST APIs, enabling clear sustainability insights for customers.

PATENT:

Linxiang World Campus Second-hand Transaction WeChat Mini Program (V1.0)

Registration Number: 2022SR1336407, Publication Date: August 9, 2022

Yicha WeChat Mini Program for Investigating Influencing Factors in High School Graduates' School Choice (V1.0)

Registration Number: 2022SR1336422; Publication Date: August 9, 2022

AWARDS:

Beijing Forestry University Outstanding Student Scholarship (10/2022)

Beijing Forestry University Academic Excellence Scholarship (10/2022)

Honourable Mention, Mathematical Contest in Modelling (02/2022)

Third Prize, Mathematics Competition, BJFU (11/2021)