ZHENHAO ZHAO

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EDUCATION

UNIVERSITY COLLEGE LONDON London
MSC Financial Technology 2023 - 2024
- Highlight subjects: digital finance, algorithm trading, data science

DURHAM UNIVERSITY Durham
Bachelor Degree Of Computer Science 2020 - 2023
- First-class degree, 87% in dissertation.

WORK EXPERIENCE

ALLIANZ TECHNOLOGY London
IT Intern June 2022 - September 2022
- Championed a dynamic team in crafting the "Early Career" website, placing a strong emphasis on fostering diversity, **inclusion**, and **equality** to ensure platform resonates with a broad spectrum of users.
- Mentored team members in **Agile** best practices, overseeing adoption of **user story** creation, facilitating effective **daily stand-ups**, and directing prioritisation of tasks using the **MoSCoW** method to streamline project workflow.

HIGHLIGHTED PROJECTS & EXPERIENCE

PERSONAL PROJECT London
PigSave: Personal Financial Application December 2023 - Present
- Utilised **React.js** for dynamic UI development and combined **Node.js** and **Python** for high-performance backend and data processing.
- Designed **REST APIs** deploying ChatGPT and Plaid APIs for key application functionalities. Also implemented end-to-end **system testing** via **Cypress**.
- Applied serval **design patterns**, such as abstract factory, singleton, mediator, and MVC.
- Designed **system and software architectures** prior to implementation to ensure clear, easy-to-maintain code, adhering to the **SOLID** principles throughout development process.
- Accomplished **CI/CD** processes with **Docker** and **GitHub Actions**. Deployed server-side on **Fly.io** and client-side operating **Vercel**, publishing applications to public domain.

UNIVERSITY COLLEGE LONDON London
ETF Analysis and Trading Strategies: SPY vs VGT February 2024 - March 2024
- Conducted **time series analysis** using **SMA** to extract **signals** and executed trades based on **golden cross** and **death cross** indicators.
- Assessed **ACF** and **PACF** functions of time series data to inform decisions on **AR**, **MA**, and **ARIMA** modelling approaches.
- Designed and executed a robust **pair trading strategy**, informed by comprehensive **stationarity** and **cointegration tests**, capitalised on predicted trends with a high degree of precision.

DURHAM UNIVERSITY Durham
Deep Learning In Recommender System November 2022 - June 2023
- Applied a modified version of Deep Variational Autoencoder with a Shallow Parallel Path for Top-N Recommendation **(VASP)** and Singular Value Decomposition **(SVD)** on the MovieLen 20M dataset. As a result, it has outperformed the SOTA model.

TECHNICAL SKILLS

- 4 years **Python** experience and 1 year of **C#** experience in game development
- Knowledge of **Java** and **C++**
- Applied **Web development skillset** such as **CSS, HTML, JavaScript, React.js, Node.js** in serval web projects.
- Familiar with SQL MongoDB and database design.
- Familiar with **Docker**, **CI/CD** pipeline with **Github Action**, current learning **kubernetes**.
- Applied scikit-learn, **NumPy, Pandas, SciPy, PyTorch** in various **machine learning** projects.
- Experience with pytest for **unit testing** and apply **Testing Driven Development** in certain projects.

QUALIFICATIONS AND SKILLS

- Azure AI Fundamentals certification