Hao Zhou

https://github.com/Jackson-Iceberg zhouhao010@gmail.com (+44) 077069373307

Education

University of Edinburgh, Edinburgh 2018-2022

Course:(BSc Hons) Artificial Intelligence and Computer Science, anticipated First Class Honours Degree
Core modules: Computer Communications and Networks (95%), Foundations of Natural Language Processing (80%), Applied Machine Learning (70%), Object-oriented Programming(98%)

University of Edinburgh, Edinburgh 2022-2023

Course:(MInf) Master of Informatics with Honours,
Core modules: Machine Learning Practical, Advanced Database system, Accelerated Natural Language Processing,

Work Experience

Data Analysis Intern at JinDong (JD.COM), Beijing, China **April.2021-Sep.2021**

- Organized and optimized the internal requirements of the department, analyzed the user profile, explored the attractive selling points of the new products to increase sales.
- Collaborated with PM, programmer and regional shop managers to promote the project, evaluated the input/output ration, exposure and project GMV.
- Assisted with 5 official offline shops were opened, joined 4 Big Promotion projects, 4 official JD fresh food TVCs were created, over 50 internet KOL assisted with those promotions, TVC “Guangdong Lychee” was broadcasted over 10 million times on online platforms, and over 150 million exposures, increased 50% compared to previous year.

Modelling and Software Engineer Intern at Huatai Securities (HTSC), Shenzhen, China **June.2020-Dec.2020**

- Based on Convolutional Neural Network (CNN) model to select stocks, tested and forecasted in a full Chinese A-share stock pool to evaluate model performance.
- Extracted features and reduced all the features into two-dimensional form, trained the model via training set and testing set. Tested model after cross-validation and tuning.
- The CNN model has an annualised excessive return of approximately 15% and a maximum retracement of 7%, which is better than the Naive Bayes Model and linear regression models. The AI algorithms used to construct the stock selection strategy are a summary of historical experience and are subject to failure, and the data is only retrospective and not predictive.

Project Experience

Movie Recommendation System

- Predicted the ratings of unwatched movies and predicted what movies users like to watch based on the user’s data.
- Cleaned the data, extracted features and used collaborative filtering. Used PCA and normalization to reduce dimensionality of data and solved data sparsity problem. Used CNN model to analysis and predict.
- The accuracy of the predicted scores increased by 10%, reached accuracy rate of 85%.

Drone flight path (Dynamic Programming)

- Based on the position of drone and the location of air detection points, found the best flight path, made sure all the detection points are visited and return to starting point in the shortest number of steps. A drone route map is drawn via Gjson. Used algorithm: A* algorithm, greedy algorithm, Genetic Algorithm, Ant colony optimization algorithm
- Avoided no-fly zone and escaped the no-fly zone traps. Improved the algorithm to avoid the drone that is getting stuck.
- All the drones can read all air detections points and return to starting point before the power is exhausted. The drone efficiency increases 25% via the algorithms.

Skills

Programming languages: Java(proficient), Python(proficient), SQL (intermediate), comfortable with Haskell and Matlab.

Frameworks: Bootstraps(intermediate), Django(intermediate), Spring(familiar), TensorFlow(intermediate)

Languages: English(conversational), Mandarin (Native)

Interest: Powerlifting, swimming, boxing