Zihao Ye

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EDUCATION

Beijing University of Posts and Telecommunications　　　09/2019 – 06/2023

Bachelor of Science (Engineering) with Honours, First Class

Queen Mary University of London Joint Program, London

International School of BUPT, Beijing | Overall GPA: Top 10%

PREPRINT

Improving Image de-raining Models using Reference-guided Transformers

Authors: Zihao Ye, Jaehoon Cho, Changjae Oh

Status: Under Review

Target Conference: 2024 IEEE International Conference on Image Processing (ICIP)

RESEARCH EXPERIENCE

Tsinghua Statistical Artificial Intelligence & Learning Group　　　04/2022 – 01/2024

PyTorch | C++ | CUDA　　　　　　　　　　　　　　　*Supervised by Prof. Jianfei Chen*

- Utilized fully quantized training for low-precision training on the Diffusion Model EDM, resulting in accelerated training
- Explored the application of stochastic depth and attention head dropping techniques as replacements for dropout in deep neural networks to provide implicit regularization
- Evaluated the stochasticity of these methods to gauge their respective strengths in implicit regularization and assessed their impact on training speed

BUPT Pattern Recognition and Intelligent System Laboratory　　　01/2022 – 04/2022

PyTorch | scikit-learn | MATLAB

- Implemented text classification tasks on the THUCNews dataset using CNN and RNN models
- Employed various image processing methods such as Harris Corner Detector and changing color model to image pre-processing so that the accuracy and coherence of image recognition tasks in FGIA are perfected

NTU Artificial Intelligence Internship Program　　　01/2020 – 04/2020

scikit-learn | R　　　　　　　　　　　　　　　*Supervised by Dr. Teik Toe Teoh*

- Utilized Particle Swarm optimization to adjust various hyperparameters of an image classification task with an MNIST dataset and CNN model
- Established correlations between indicators and trends of fertility decline using shallow neural networks and SoftMax
- Determined the prevalence of diabetes within a given sample based on parameters such as plasma glucose concentration, blood insulin concentration, and blood pressure two hours after meals

PROFESSIONAL EXPERIENCE

Machine Learning Researcher (Intern), Honor of Kings, Tencent　　　01/2024 – Present

Pyspark | Hive SQL | TensorFlow

- Developd a DeepFM-based model for skin precision ranking recommendations using TensorFlow, boosting overall user monetization

- Constructed training samples for model development utilizing PySpark and SQL
- Employed PySpark and SQL for data extraction and analysis, enabling targeted improvements to the model and sample dataset, thereby optimizing online performance
- Implement incremental training for real-time models, boosting business metrics by adapting quickly to user perferrences and behavior patterns

Machine Learning Quant. Researcher (Intern), Southwest Securities   08/2021 – 01/2022

PyTorch | scikit-learn | Wireshark | Wavelet Analysis | MATLAB

- Developed an automated framework using Selenium and Wireshark for data collection, analysis, and preprocessing
- Utilized wavelet transform to filter noise from the data, resulting in improved data quality and success rate
- Employed different regression models, LSTM, and other neural networks to construct a secondary stock market price prediction model
- Applied Decision Tree and bagging techniques to form a decision-making function and made necessary model adjustments

Financial Technology engineer (Intern), China Construction Bank   07/2020 – 09/2020

Java | Maven

- Maintained the financial product recommendation system based on deep learning
- Assisted in collecting, cleaning, and analyzing relevant data on the growing presence of FinTech in the pharmaceutical industry

SKILLS

Language: PyTorch, PySpark, SQL, TensorFlow, Java, MATLAB, C++, C, JavaScript