HAOEN HUANG

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Education

Northeastern University, Boston, MA — Expected Dec 2024
Master of Science in Applied Mathematics — GPA: 3.75/4.0
Coursework: Machine learning 1&2; Algorithm; Topology 2; Principle Scalable Data Management; Algebra 1; Optimization Techniques

University of Science and Technology of China, Hefei, China — July 2022
Bachelor of Science in Information and Computing Science

- Member of the Sports Department of the School of Mathematics of USTC, Hefei, China

Skills & Interests

- Technical Skills: Advanced Python (Numpy, Pandas, Matplotlib, Scikit-learn, SciPy, TensorFlow, PyTorch), Advanced MATLAB, C++, SQL, Advanced Excel, NLP, Linear, Logistic, Ridge, Lasso Regression. Neural Networks, PCA
- Language: English, Mandarin (Native), Cantonese (Native)

Professional Experience

Essence Securities, Guangzhou, China — July - Oct 2022
Securities Intern, Group leader

- Successfully delivered a final presentation and research report, designed and implemented two separate scoring systems using PCA and entropy weighting methods to provide customized private equity fund recommendations based on investor risk profiles.
- Applied financial theories to securities analysis, market research, and financial product evaluations, collaborating with senior colleagues and enhancing problem-solving skills.
- Gained hands on experience in customer research, financial product analysis, and sales report creation, by engaging in practical sessions and presenting findings to peers and supervisors, receiving feedback.
- Showcased strong adaptability and teamwork by adhering to company policies, effectively collaborating with co-workers, and receiving recognition for leaving a lasting positive impression on the organization.

Coursework and Research

Multi-Irreducible Spectral Synchronization for Robust Rotation Averaging — October 2023 – March 2024
Advised By Professor David Rosen, with Ph.D. student Owen Howell

- Applied irreducible decomposition to refine an existing method, resulting in the development of an innovative approach.
- Implemented the new method using Python, rigorously tested it with both synthetic and Real World Data to ensure robustness and accuracy.
- Conducted comparative analyses against multiple established methods using synthetic and real data, achieving a 50% reduction in error rates.

Machine Learning and Statistical Learning Theory II — Spring 2024

- Led a text summarization project using the T5 Transformer model, summarizing over 300,000 news articles.
- Developed a sentence ranking method to prioritize important sentences using word frequency.
- Evaluated model performance with ROUGE-L scoring, addressing context fragmentation and high computational costs.