DONGYANG WANG

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EDUCATION

Monmouth University, West Long Branch, NJ   *2024 – 2026 (Expected)*
- M.S. in Computer Science, GPA: 3.94

Rensselaer Polytechnic Institute, Troy, NY   *2012 – 2014*
- M.S. in Financial Engineering and Risk Analytics, Quantitative Finance Track, GPA: 3.75

East China University of Science and Technology, Shanghai, China   *2008 – 2012*
- B.S. in Finance, GPA: 3.5
- B.S. in Law, GPA: 3.5

RESEARCH INTERESTS
- Machine Learning, Transformer-based Models, Medical & Financial AI, LLM, Quantum Machine Learning, CV

RESEARCH EXPERIENCE

Monmouth University, West Long Branch, NJ   *2024 – Present*
Research Assistant
- Designed and implemented Time-Aware Transformer models, including both classification and regression-based time to event forecasting on large-scale ventilator datasets.
- Evaluated Quantum Machine Learning (QML) architectures and compared their performance to GPU-based models in terms of computational efficiency, predictive accuracy, and power usage.
- Developed multimodal weighted ensemble learning frameworks to model athlete injury risk and readiness score.

PUBLICATION
- Qu, W., Zheng, L., **Wang, D.**, Wang, J., & Pan, H. (2025). Time-Aware Transformer-based Prediction Model for AECOPD. *Studies in health technology and informatics*, 329, 1089-1093.

WORK IN PROGRESS
- Qu, W., **Wang, D.**, Zheng, L., Alvarez, F. E., Polasa, S., and Wang, J. Multimodal Injury Risk and Performance Prediction in Tennis using Weighted Ensemble Learning. Revise and Resubmit at *Communications of the ACM*.

COURSE PROJECTS

Deep Neural Networks for Hospital Length-of-Stay (LOS) Prediction
- Developed and tuned a deep neural network using Keras Tuner to optimize architecture and hyperparameters.

Sports Injury Sentinel LLM (PEFT + DPO Medical Chatbot)
- Created a domain-specific sports-injury medical dataset and implemented LLM-as-Judge evaluations.
- Fine-tuned the Qwen-3 model using PEFT method (LoRA/QLoRA) and applied Direct Preference Optimization (DPO) to improve preference-aligned responses.

LLM based Company Shareholder Letter Sentiment Analysis
- Applied zero and few-shot with Qwen-3 to extract strategic themes and sentiment trends from shareholder letters.

Precision Agriculture Image Classification (CNN + Transfer Learning)
- Built multiple image-classification models (CNN, and VGG16 transfer learning) to identify different plant species.

TECHNICAL SKILLS
Programming: Python, Java, C++, MATLAB, R, SQL, MongoDB