Grace(Junran) Tao - Machine Learning

551 359 1768 | jtao11@stevens.edu | LinkedIn | Portfolio | Hoboken, New Jersey

EDUCATION

Stevens Institute of Technology   Hoboken, New Jersey
Master of Science in Computer Science — GPA: 3.8/4   *Sep 2024 – May 2026*

University of Shanghai for Science and Technology   Shanghai, China
Bachelor of Engineering in New Media Technology   *Sep 2019 – Jun 2023*

RESEARCH PUBLICATION

- Yuebo Luo, Shiyang Li, **Junran Tao**, Kiran Gautam Thorat, Xi Xie, Hongwu Peng, Nuo Xu, Caiwen Ding, and Shaoyi Huang. "**DR-CircuitGNN: Training Acceleration of Heterogeneous Circuit Graph Neural Network on GPUs**" International Conference on Supercomputing (ICS 2025).

EXPERIENCE

Stevens Institute of Technology   Hoboken, New Jersey
Deep Learning Research Assistant   *Sep 2024 – March 2025, Internship*

- Optimized GPU-based test software using custom CUDA kernels, achieving $4.8\times$ training speedup and reduced memory usage.
- Enhanced software performance through GPU profiling and integrated solutions into PyTorch for multi-server deployment.
- Built tools to support testing, validation, and deployment of deep learning models across diverse datasets.

EarthView Image Inc.   Chengdu, China
Deep Learning Engineer   *Jul 2023 – Jun 2024, Full-time*

- Developed a deep learning-based real-time video defect detection system using ResNet18 and OpenCV, achieving 82.4% accuracy with CUDA acceleration.
- Developed an advanced training optimization pipeline with CosineAnnealingWarmRestarts and custom logging, boosting model iteration efficiency by 27%.
- Optimized and refactored the authentication system (C#, .NET), reducing latency by 30% through caching and lazy-loading.
- Enhanced internal test tools for GIS software, accelerating map load times by 50%.
- Designed a resilient form validation engine to reduce data errors during user testing by 40%.
- Built internal software update modules for GIS deployment environments, automating release propagation across distributed servers.

Yunshang Chuangxiang Intelligent Technology Co. LTD   Shanghai, China
Software Engineer   *Jun 2022 – Aug 2022, Internship*

- Built and deployed a modular data platform supporting CRM features and cultural archives, optimizing queries with compound indexes and Redis caching and enabling keyword search/download of 100,000+ opera scores with full CRUD admin tools.
- Delivered bulk import/export APIs, role-based access control, and 95%+ functional/security test coverage using JUnit, Mockito, and custom cases.
- Business Impact: Improved data accessibility, operational efficiency, and secure multi-role management across business and cultural domains.
- Software Tools: Spring Boot, MySQL, Redis, .NET, SQL Server, Ali Cloud, JUnit, Mockito, REST API

SKILLS

Languages: Python, Java, C/C++, C#, JavaScript, HTML/CSS, SQL, TypeScript, MATLAB

Technologies: PyTorch, TensorFlow, OpenCV, scikit-learn, Computer Vision, Graph Neural Networks (GNNs), Model Optimization, GPU Acceleration, Multi-Stream CUDA, Large-scale Data Processing, EDA Applications