JIANING QI

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EDUCATION

The Graduate Center, CUNY | PhD Computer Science | Sep 2022 – Currently Enrolled | 4.0/4.0 (Expected Graduation: May 2026)

- **Relevant Coursework**: Large Language and Vision Model, Reinforcement Learning, Deep Learning, Computer Vision
- **Leadership**: Computer Science Program Representative

New York University | M.S. Mathematics | Sep 2017 – Sep 2020 | 3.14/4.0

New York University | B.A. Mathematics & Philosophy, Computer Science Minor | Sep 2013 – Sep 2017 | 3.5/4.0

PROFESSIONAL EXPERIENCE

AI Core Machine Learning Intern (PhD)   **3iMembers**| Sep 2024 – Jan 2025
- **Developed Novel Retrieval-Augmented Generation (RAG) System**: Designed and implemented a customized RAG system from scratch, leveraging LLMs to enhance semantic search and recommendations, demonstrating proficiency in both algorithmic development and large-scale implementation.
- **Semantic Search & NLP Optimization**: Transitioned a keyword-based search engine to a semantic search model, optimizing for contextual accuracy and improving information retrieval accuracy by a large margin, meeting real-world demands.
- **Data-Driven Matching Algorithms**: Engineered and deployed an algorithmic member-matching functionality, which auto-generates personalized recommendations based on user profiles, using NLP to surface insights and automate communication.

Founder   **Automanus, Inc.**| Aug 2020 - 2022
- **NLP and AI Innovation**: Built a text summarization engine using abstractive NLP techniques, which improved information accessibility for end users. Led technical development, showcasing experience with scalable, production-level NLP applications.
- **Entrepreneurial Leadership**: Directed a team of 10, achieving 1st place in NYC Business Plan Competition (Software Track) and led the team as semi-finalists in NYU's $200K Entrepreneurship Challenge, demonstrating project management and cross-functional collaboration.

RESEARCH EXPERIENCE

Graduate Research Assistant, City College Visual Computing Laboratory (CCVCL)   June 2022 – Present
- **Advanced Vision-Language Fusion Models**: Researched and optimized multimodal algorithms by combining vision models (CLIP, DINOV2) with language components. Demonstrated expertise in computer vision and LLM integration.
- **Image Generation Model Optimization**: Enhanced latent space encoders for MAE and GPT generative image models, resulting in a 2% accuracy gain in downstream image classification tasks. Experience with state-of-the-art deep learning models and embedding optimizations for generative tasks.
- **Research Communication & Publication**: Published work in peer-reviewed journals, including "Exploring an Affective and Responsive Virtual Environment to Improve Remote Learning"

OTHER

PUBLICATIONS:

- Qi, Jianing, Hao Tang and Zhigang Zhu. "VerifierQ: Enhancing LLM Test Time Compute with Q-Learning-based Verifiers.".
- Qi, Jianing, Hao Tang, and Zhigang Zhu. 2023. "Exploring an Affective and Responsive Virtual Environment to Improve Remote Learning" Virtual Worlds 2, no. 1: 53-74.

OPEN SOURCE CONTRIBUTIONS:

- **torchtune**: Contributed to open-source library development for LLM training, showcasing practical experience in community-driven AI improvements.