Qiuyu Tang

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Professional Summary

AI researcher and developer with expertise in Generative AI, Deep Learning, and Computer Vision. Skilled in machine learning, adversarial robustness, and AI security, with hands-on experience in diffusion models, transformers, and multi-modal AI. Proficient in Python, PyTorch, and TensorFlow, with a track record of publishing research and building AI-driven projects, including deepfake detection and adversarial attacks. Strong problem-solving skills, full-stack development experience, and a passion for innovation and collaboration.

Education

Lehigh University — **Doctor of Philosophy** | GPA : 4.00 — *Aug. 2023 – Present*
Lehigh University — **MS in Computer Science** | GPA : 3.64 — *Aug. 2021 – May 2023*
Wuhan Institute of Technology — **BEng in Software Engineering** | GPA : 3.32 — *Sept. 2016 – Jun. 2020*

Technical Skills

ML & AI Diffusion Models, Vision Language Models, Transformers, VAEs, Reinforcement Learning, Adversarial Attacks
Programming Python, C/C++, Java, SQL, PyTorch, TensorFlow
Data Science Hadoop, R, Weka, Tableau
Web & Tools JavaScript, HTML/CSS, Hugo, Jekyll
Languages English (Proficient), Chinese (Native)

Experience

Workshop Organizer | *Visual Art, Generative AI, and the Legal/Ethical Dilemma Workshop at WACV* — *Mar. 7, 2026*
- Organized and coordinated a peer-reviewed workshop.
- Managed review process and communications.
- Chaired sessions and delivered opening & closing remarks.
- Developed the workshop website.

Teaching Assistant | *CSE 160 - Introduction to Data Science* — *Fall 2024 & Fall 2025*
- Led lab sessions and held weekly office hours to support student learning.
- Graded coursework, proctored exams, and assisted with course administration.

Game Development Intern | *Zhenjiang Geek Talents Training Camp Corp.* — *Feb. 2019 - Apr. 2019*
- Proposed innovative game concept *Jump* and developed a working prototype using PyGame.
- Assisted in integrating AI modules to enhance game functionalities and performance.
- Collaborated with cross-functional teams to troubleshoot, debug, and optimize code performance.
- Participated in website development for presentation using Bootstrap and JavaScript.

Publications & Preprints

A Survey of Origin Protection Methods against Diffusion-based Image Editing | ***Tang, Q.**, Bharati, A.* — *Under Review*
MicroFakes: A Dataset for Small but Semantically Relevant Image Manipulations | *Krinsky, J., **Tang, Q.**, Bharati, A.* — *Under Review*
StyleProtect: Safeguarding Artistic Identity in Finetuned Diffusion Models | ***Tang, Q.**, Krinsky, J., Bharati, A.* — *Under Review*
Measuring Semantic Change for Image Manipulations | *Krinsky, J., **Tang, Q.**, Bharati, A.* — *Under Review*
Watermarks vs. Perturbations for Preventing AI-based Style Editing | ***Tang, Q.**, Bharati, A.* — *WMARK@ICLR2025*
Is Perturbation-based Image Protection Disruptive to Image Editing? | ***Tang, Q.**, Ayambem, B., Chuah M., Bharati, A.* — *ICIP2025*
Exploring Saliency Bias in Image Manipulation Detection. | *Krinsky, J., Bettis, A., **Tang, Q.**, Moreira, D., Bharati, A.* — *ICIP2024*

Projects

Traceability Analysis of Image Protection Methods — *SeeVi Lab @ LU*
- Crafted up-to-five levels Chains of Editing which include traditional and AI-based image editing methods.
- Conducted a traceability analysis of perturbation-based and watermark-based protection.

Origin Protection against Diffusion-based GenAI — *SeeVi Lab @ LU*
- Proposed an artwork-protection method against diffusion-based customization models.
- Conducted experiments comparing with prior works and achieved SOTA performance.

Visual Summarization for Content Organization — *SeeVi Lab @ LU*
- Cooperated with Celebr8 Life Company and provided them with CV-related technical support.
- Developed an AI-powered image clustering system using pre-trained VLM models.
- Achieved 72.95% accuracy in organizing user albums by semantic content.

Platform Provenance Analysis of JPEG-compressed Images — *Lehigh University*
- Explored the statistical features of images compressed by various online social networks, e.g., X (Twitter), WeChat, Facebook, and WeBlog.

Multi-modal Transformer for Deepfake Detection — *Lehigh University*
- Developed a transformer-based deepfake detection model using image & audio features.
- Optimized cross-modal fusion techniques to improve accuracy in identifying manipulated media.

Backdoor Attack Benchmark on Machine Learning Classification Models — *Lehigh University*
- Benchmarked five state-of-the-art backdoor attacks across CIFAR 10 and MNIST datasets.
- Analyzed the robustness of current attacking methods.

Survey of Information Extraction — *Lehigh University*
- Completed a literature review on the revolution of Information Extraction along with the raising of AI.
- Compared existing Information Extraction methods.

Research on Robot's Gesture Recognition — *Artificial Intelligence Laboratory @ WIT*
- Created a dataset of Factory Robotic arm and annotated the keypoints.
- Developed a gesture detection model for Factory Robotic Arm to avoid vicious wounding incidents.