

Jiaqi Ye

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EDUCATION

University of Wisconsin-Madison, Madison, WI, USA

Jan. 2024 - Present

- Candidate for B.S. Computer Science (GPA: 3.95/4.0)
- Honors: Dean's List for Four Consecutive Terms; maintained Good Academic Standing

Beijing Forestry University, Beijing, China

Sep. 2021 - Dec. 2023

- Undergraduate Major: Digital Media Art
- Honors: Academic Scholarships, College Outstanding Student Leader

INTERSHIPS

UW Surgery, Madison, USA, AI Engineer

Jan. 2026 - Present

- Co-developed PAGING DR. CHATBOT, a patient-facing AI chatbot powered by large language models (LLMs) to automate follow-up care for incidentally discovered adrenal nodules.
- Built a retrieval-augmented generation (RAG) pipeline based on UW clinical guidelines and internal workflows to ensure safe, accurate, and misinformation-free medical responses.
- Attempted to deploy end-to-end conversational workflows for patient education and lab coordination, integrating secure API-based backend services to support real-world clinical use.

The Donovan's Venom (Nonprofit), Los Angeles, USA, Full-Stack and Game Developer

Apr. 2025 - Jan. 2026

- Implemented a full-stack web platform using React and PostgreSQL to support online music education for ~500 users.
- Optimized checkout flow with PayPal and Venmo that reduced transaction errors by 25%, and enhanced Contact and Cart pages to reduce load time by 30% via frontend performance tuning and responsive design.
- Integrated a story-driven 2.5D RPG for gamified learning; implemented core gameplay and a custom Player Controller in Unity with smooth camera switching using Cinemachine, improving gameplay smoothness by 50%.

RESEARCH EXPERIENCES

Latent Diffusion & Rectified Flow for Conditional Image Generation

Jan. 2026 - Present

Research Assistant for Prof. Yin Li, University of Wisconsin-Madison

- Implemented and compared DDPM and Rectified Flow, completing an end-to-end PyTorch reproduction.
- Built a UNet with time-step and conditional embeddings for conditional image generation on MNIST and AFHQ.
- Designed a Latent Diffusion Model to reduce computation while maintaining quality, achieving FID ≤ 35 on AFHQ.

Controllable T2V Vector Animation Generation

Jun. 2025 - Jan. 2026

Research Assistant for Prof. Yin Li, University of Wisconsin-Madison

- Fine-tuned Wan 2.1 video models using DiffSynth-Studio to generate high-resolution, vector-stylized animation.
- Implemented layer-wise, user-controllable vector animation algorithms to enable precise control over motion, style, and structure, improving generation efficiency and consistency by 25%.

Character-Centric LoRA Fine-Tuning for Stable Diffusion

Dec. 2024 - Apr. 2025

Research Assistant for the University of Virginia Computer Vision Lab

- Built a custom character dataset and fine-tuned Stable Diffusion 1.5 using LoRA for Kokomi character generation.
- Optimized generation, improved model performance and personalization, and increased similarity by 20%.

Raindrop Reflection - Based 3D Scene Reconstruction

Jun. 2024 - Aug. 2024

Research Assistant for the University of Virginia Computer Vision Lab

- Simulated realistic rainfall and raindrop reflections in Blender to provide input for 3D scene reconstruction.
- Modeled light propagation and reflection to capture complex optical interactions in virtual environments.
- Helped to test algorithms to reconstruct 3D scene geometry from raindrop reflections.

SELECTED PROJECTS

Innovation & Entrepreneurship Program, Game Developer

Jun. 2023 - Dec. 2023

- Designed a Unity 2D puzzle game prototype blending *The Book of Songs* poetry with herbal knowledge, implementing 5 culturally themed puzzle mechanics and interactive storytelling elements.
- Refined the design through iterative user testing with 35 participants, producing an intuitive and engaging playable demo while incorporating feedback to improve usability and gameplay flow.

Course Project - Puppy Knight Action Adventure Game

Feb. 2023 - Dec. 2023

- Designed and implemented an action-adventure game in Unity, contributing to gameplay logic and system architecture.
- Developed character movement, interactive UI, and a combat system via C# scripting, including attack logic, collision-based hit detection, and health management.

Course Project - FORESTS Responsive Web Development

Sep. 2022 - Jan. 2023

- Designed and developed the full-stack environmental website FORESTS, implementing responsive layouts, dynamic interactions, and cross-browser/mobile compatibility.
- Built modular frontend components to enhance user experience and maintainability.

TECHNICAL SKILLS

- **Programming & Databases:** Python, Java, C#, C, JavaScript, HTML/CSS, SQL, PostgreSQL
- **AI, ML & 3D Graphics Tools:** Foundation Models, PyTorch, NumPy, Pandas, Blender, Unity, 3ds Max
- **Software & Development Tools:** React, Node.js, Git, Linux, Docker, Android Studio, Adobe CC, Figma