JIAQI WU

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EDUCATION

University of Michigan, Ann Arbor Ann Arbor, MI, USA
Master of Science in Information, Thesis Option *Aug 2022 – May 2024*
Cumulative GPA: 3.98/4.00
Thesis: Exploring Bridges Between Creative Coding and Visual Generative AI
Relevant Courses: Advanced Topic in Computer Vision (A), Natural Language Processing (A), Large Language Models (A), Visualization (A), Information Retrieval (A+), AR/VR Intro (A+), Interaction Design (A)

Fudan University Shanghai, China
Bachelor of Science, Information Security (under Computer Science) *Sept 2018 – Jun 2022*
Cumulative GPA: 86/100
Relevant Courses: Algorithm Design & Analysis (A), Introduction to Computer System I/II (A-/A)
Selected Awards: Outstanding Student (2019–2020) Outstanding Undergraduate Student Scholarship (2020, 2021)

WORKING PAPERS & PUBLICATIONS

***Jiaqi Wu**, Eytan Adar* Exploring Bridges Between Creative Coding and Visual Generative AI
The 14th International Conference on Artificial Intelligence in Music, Sound, Art and Design (EvoMUSART), part of evo 2025*
***Jiaqi Wu**, John Joon Young Chung, Eytan Adar*[Preprint] viz2viz: Prompt-driven stylized visualization generation using a diffusion model.
***Jiaqi Wu**, Bodian Ye, Qingyuan Gong, Atte Oksanen, Cong Li, Jingjing Qu, Felicia F. Tian, Xiang Li, Yang Chen* Characterizing and Understanding the Development of Social Computing through DBLP: A Data-Driven Analysis.
Journal of Social Computing, vol. 3, no. 4, pp. 287-302

EXPERIENCE

Research Associate
Electrical & Computer Engineering, University of Michigan *Supervisor: Prof. Andrew Owens.* *Sept 2024-*
Computer Vision, Creative AI

Software Engineering Intern
Center for Social Network Research, Tsinghua University *Supervisor: Prof. Jar-Der Luo.* *Dec 2020–Jun 2022*
Big Data and Social System Development

SELECTED RESEARCH

University of Michigan, Ann Arbor *Advisor: Prof. Andrew Owens* *Sept 2024–Present*
Rethinking image generation and manipulation with splat diffusion

- Designed and trained a novel image generation model with 2D gaussian splats diffusion
- Designed and implemented applications to perform novel image editing tasks by the proposed approach

University of Michigan, Ann Arbor *Advisor: Prof. Eytan Adar* *Aug 2024–Present*
Programming Randomness for Creative Artifacts with LLM

- Demonstrated how to use a novel programming environment to support artists blending a mix of randomness and structure to achieve a desired outcome
- Implemented PRACA, an environment for creating SVG content allowing both programming and direct control of generated objects to support generative, creative tasks

University of Michigan, Ann Arbor *Advisor: Prof. Eytan Adar* *June 2024–Present*
Creating animations like writing story with LLM

- Designed novel LLM interactive methods for JavaScript animation generation, where prompt is automatically updated to reflect the latest details of LLM result and bidirectional knowledge flow between prompt, code and animation.
- Implemented an interface with React basing on proposed method using interactive textual and code editing

University of Michigan, Ann Arbor *Advisor: Prof. Eytan Adar* *May 2023–May 2024*
Augmenting Generative Procedural Art with Generative Model

- **Research question**: How can feature patterns from AI output help create abstract generative procedural art?
- Devised a novel method for augmenting generative procedural art where artist can make full use of both the programmability of code and stylization ability of generative AI
- Built a *p5.js* library supporting diverse functions for creating procedural arts through a generative model, showcasing various art examples

University of Michigan, Ann Arbor *Advisor: Prof. Eytan Adar* *Sept 2022–Oct 2023*
Diffusion Model in Creative Data Visualization

- **Research question**: How can generative models help create processes with high precision requirements?
- Identified a design space and taxonomy of stylized visualization.
- Designed and developed *viz2viz*, a general recipe with specific workflows to support creating stylized visualization with pipelines implemented in *PyTorch*.
- Completed a research preprint as first author

Fudan University *Advisor: Prof. Yang Chen* *Jan 2022–Oct 2022*
Social Computing Research Analysis

- **Research question**: How do we explore social computing research using cross-platform publication data?
- Designed and implemented a systematic workflow for a research bibliometric analysis on social computing with literature data from the DBLP platform
- Deployed graph network analysis , information visualization and structural hole theory publication data
- Published a research paper to an IEEE Journal, *Journal of Social Computing (JSC),* as first author

OTHER SELECTED PROJECT

Gated Prefix Propagation for Encoder Models *University of Michigan, 2023*
Proposed Gated Prefix Propagation (GPP), dynamically combining input-related information from past prefix activations with task information from new prefixes via a novel gating mechanism.

Visual Text Analyzer: Creative image generation *University of Michigan, 2023*
Developed a customized GPT enabling creative image generation from complex input text paragraph

AR application design for artists and designers *University of Michigan, 2023*
Designed two AR applications to improve the work of artists and designers, built video prototypes with *Lens Studio*

Stylized Brush *University of Michigan, 2023*
Developed a stylized brush application to allow painting with brush stylization using *Python p5* and *DreamStudio Stable Diffusion* (SD) API

Natural Language Processing: Simple Text Inpainting System *University of Michigan, 2023*
Proposed the idea of text inpainting and created the dataset, simple implementation, and evaluation

Information Retrieval: Small Search Engine on Social Computing Publication. *University of Michigan, 2022*
Used *PyTerrier* to rank models to create a search engine for high-quality social computing publications

HCI Research on Shape Pronto : Shape based Augmented Reality Effects *HKUST, 2021*

Conducted a user study to extract the design space of Shape Pronto made by Reality Composer

SKILLS & CERTIFICATIONS

Certifications: Machine Learning Specialization Certificate (Stanford Online)
Programming languages: *Python, JavaScript, SQL*, *R, C/C++*
Programming frameworks/software: *PyTorch, React, Django, PyTerrier*, *Altair*, JEB/Jadx, Lens Studio, ARKit
Languages: Chinese (Native), English (Advanced; TOEFL iBT: 112 (speaking: 28), GRE: V-159 + Q-169 + AW-4.0)
Art & Design: Painting, crafting, video editing, storyboarding**,** photography, Nuke, Final Cut Pro, Premiere