

AMCC5170: Interactive Visual Art with Generative Models

Course Outline - Spring 2026

Prof. Chao (Harry) Yang

Course Information

- **Term:** Spring 2026
- **Time:** Thursday 12:30 – 15:20
- **Location:** MIL13004
- **Instructor:** Prof. Chao (Harry) Yang
- **Teaching Assistant:** Sitong Cheng
- **Contact:** yangharry@ust.hk

Course Description

This course explores the intersection of contemporary visual art practice and deep generative modeling, with an emphasis on interaction, authorship, and experience design. Each week is organized around a foundational or recent research idea that has shaped (or is shaping) the way artists use AI—followed by hands-on prototyping and critique. Students will move from image synthesis to controllable generation, then to real-time interactive systems and installation-oriented workflows, developing both technical literacy and artistic voice.

Course Format & Tools

- **Format:** Lecture + Discussion + Tech Demo + Studio Prototyping + Critique.
- **Tools:** Python, PyTorch, TouchDesigner, Max, Unity, WebGL, OSC.
- **Expectations:** Regular process logs and short artist statements accompanying work.

Learning Outcomes

By the end of this course, students will be able to:

1. Understand the conceptual vocabulary and algorithmic foundations of generative models.
2. Translate artistic intent into system design choices, implementing and fine-tuning state-of-the-art models for artistic output.

3. Design interactive systems that utilize sensor data or user input to influence generative processes.
4. Present and critique generative work using artistic and technical criteria, while analyzing ethical implications including authorship and bias.

Weekly Schedule

Each week features a lecture and discussion on a key Art–AI topic motivated by a classic or recent paper, followed by a technical demonstration, studio prototyping, and critique.

Week 1: Foundations: Generative art history, computational aesthetics, systems as artworks.

Week 2: Artistic Tooling: Creative coding ecosystems, workflows, reproducibility as artistic practice.

Week 3: The GAN Era I: The artist’s “model” as a medium; dataset as palette.

Week 4: The GAN Era II: Latent navigation as performance; editing as authorship.

Week 5: Diffusion Models I: Noise, emergence, and “process aesthetics”.

Week 6: Diffusion Models II: Conditioning as composition; controllability as choreography.

Week 7: Personalization: Identity, style, and voice; the ethics of personal data + likeness.

Week 8: Interactivity I: Interaction design for art: liveness, feedback, and spectatorship.

Week 9: Interactivity II: Installation practice: space, projection, multi-screen, sound integration.

Week 10: Multimodal Systems: Text as material; narration, scripts, story systems.

Week 11: Agents: Autonomy, co-creation, and “art direction” for generative systems.

Week 12: Ethics & Criticism: Authorship, labor, bias, appropriation, disclosure norms.

Week 13: Final Project Workshop: Curation, documentation, artist statement, exhibition prep.

Assessment

1. **Project 1 (20%):** Generative Visuals and Algorithms.
2. **Project 2 (20%):** Model Fine-tuning and Personalization.
3. **Project 3 (20%):** Real-time Interactive System.
4. **Course Presentation (10%):** Present a chosen paper/topic + art framing + discussion prompts.
5. **Final Project Presentation (30%):** Presentation and demo of one selected project developed during the semester, with documentation and an artist statement.