

# Yanyi Liu

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## Education

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- Massachusetts Institute of Technology**, Cambridge, MA, USA Sep 2023 - Present
- Master of Architecture degree candidate with Departmental Fellowship and Stipend.
  - Related Coursework in 21T.500 Theater Arts Production, 4.154 Architecture Design Studio.
- Swarthmore College**, Swarthmore, PA, USA Sep 2018 - Dec 2022
- Bachelor of Arts degree, double major in Mathematics and Art History. **GPA 3.91/4.00**
  - Set Designer of the annual senior showcase. Department Scholarship. Social Impact Scholarship.

## Production Experience

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- Set Designer**, Fall 2022 Senior Capstone Production, Swarthmore College, PA, USA Sep - Dec 2022
- Led scenic design from initial concept through technical rehearsals, performances, and strike.
  - Generated design models and drafting packages; coordinated execution with scenic shops and painters.
  - Worked closely with the director and production team during tech; responded to rehearsal and performance notes with iterative design adjustments.
  - Constructed painted floor, walls, and ceiling pieces in collaboration with set builder and scenic painter.
  - Advised lighting design, props, and practicals rentals and purchases during set construction.
- Live Camera Operator and Projection Designer**, 2025 Fall Theater Arts Production, MIT, MA Sep - Dec 2025
- Developed video footage integrating AI-generated 3D worlds and 2D panoramic images for a live projection onto a 360 degree screen, using Worldlabs, Midjourney, Stable Diffusion, and Blender.
  - Operating a film camera capturing live performances on stage, experimenting with dynamic camera movement, framing, and distortion to adapt to live actions and panoramic projections.
- Set Designer**, Fall 2024 Production, Wuming Student Theater, MIT, MA, USA Sep - Dec 2024
- Designed and constructed scenic design of a student production of a Chinese play, *Brazil*.
  - Managed props rentals and purchases during rehearsals and tech.

## Architectural Design Experience

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- Architectural Design Intern**, 3XN Architects, Copenhagen, Denmark Mar - Aug 2025  
*Project: P57 Tower A, Zuidas, Amsterdam, Netherlands*
- Contributed to the retrofit design of a landmark office tower within a large-scale masterplan transforming former bank headquarters into mixed-use developments, redefining its identity within the Zuidas skyline.
  - Advanced massing and facade studies that shaped the tower's architectural expression, integrating strategies of transparency, proportion, and materiality, and presented renderings to clients biweekly.
  - Produced floorplate design options optimizing structure reuse, core layout, and amenity spaces under strict planning constraints, through multiple drawing sets including detailed plans of each floor.
- Architectural Design and Sustainability Intern**, ZGF Architects, Washington DC, USA Jun - Aug 2024  
*Project: Johns Hopkins University Data Science and AI Facility, Baltimore, MD*
- Conducted multi-objective optimization for the building performance of a 500,000 square feet research facility in Baltimore, Maryland, improved user experience and operational carbon by 50%.
  - Optimized the geometries of façade shading and atrium skylight shading device through automated iterations of daylight, glare, and energy analysis with climate studio, ladybug, and grasshopper.
- Prototype Designer**, MITDesignX, MIT, MA, USA Jan - Dec 2024
- Developing prototypes for a self-assembled shelter system made with modular and scalable bamboo structures for internally displaced persons in Myanmar, expecting first pilot by August.
  - Creating design options for roof enclosure systems and joint connections for the bamboo modules, iterating through 3D printing and assembling physical mock-ups for structural analysis.
- Architectural Design Intern**, Zaha Hadid Architects, Beijing, China Jun - Aug 2020
- Created a digital building material library and cataloged the physical material samples for over twelve projects in East Asia, increasing efficiency of material selection and communicating with manufacturers.
  - Managed 30% of the CD and shop drawing revisions and interfacing with contractors on construction details, contributing to the major submission package of the Infinitus Plaza project in Guangzhou, China.

## Skills and Interests

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**Language:** English (Bilingual Proficiency), Mandarin (Native).

**Computer skills:** Vectorworks, Qlab, Enscape, Rhino, Adobe Suite (Indesign, Photoshop, Illustrator), Grasshopper, Revit, Vray, AutoCAD, SketchUp, QGIS, Climate Studio.

**Interests:** Art History, Photography, Flute.