

Joie Chang

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Education

Massachusetts Institute of Technology, Cambridge, MA | Bachelor of Science in Architecture

Anticipated Graduation Date: June 2017 | Cumulative GPA: 4.8/5.0

Related Coursework: Inquiry into Design and Computation, Advanced Visualization, Architecture Design Studio, Digital Design and Fabrication

Thesis: *Designing in Virtual Reality: Tools with the Human Field of Vision*

I am conceptualizing, prototyping, and testing a Unity based tool for architectural design in the Oculus Rift virtual reality environment based on the limitations of the human field of vision.

Work Experience

MIT International Design Center: Design Fabrication of 3d Expressive Puzzles

Undergraduate Researcher, Cambridge, MA (Summer 2016)

Designed prefabricated small housing with Professor Larry Sass. Made shape modules that could be prefabricated and reused to create interlocking building structures. Through a program developed in the group, Luban, we built various concrete casted models to test our design.

Plan Cerro: Pre-feasibility Study for the Funiculars: Las Cañas, Los Cipreses, and El Litre

Internship, Valparaíso, Chile (Summer 2015)

Created plans for funicular railway stations with the architecture and urban planning group, Plan Cerro. Worked collaboratively with the city government and other agencies to design the new Los Cipreses route through the ravine. These funiculars aimed to improve the mobility, connectivity, and infrastructure between the coastal level and the mountain level. Modeled, produced drawings, and ran citizen participation workshops.

Broadened Drawing-Scape: Prototyping, Software Engineering, and Visual Design

MIT Design and Computation Group, Cambridge, MA (Fall Semester 2014)

Developed a new drawing system which hand-drawing and algorithmic drawing processes interacted fluidly with Onur Yüce Gün, Ph.D. Built the hardware light projection rig. Scripted an algorithmic drawing program in Processing as well as produced drawings with the system.

Smithsonian National Portrait Gallery: Out of Many, One Installation

Internship, Department of External Affairs, Washington DC (Summer 2014)

Coordinated with Nik Apostolides, Associate Director of External Affairs and various NPG partners, to realize the facescape commissioned from the artist, Jorge Rodriguez-Gerada. The unique landscape composite portrait was constructed on the National Mall for the month of October 2014.

LightByte: Graphic Design and Communications

MIT Media Lab, Cambridge, MA (Winter-IAP 2014)

Designed competition posters, videos, and websites for LightByte, an interactive shading system.

Design Skills

Architectural:

- Rhinoceros with V-Ray, Grasshopper, DIVA, and ArchSim
- Adobe Photoshop, Illustrator, Premiere, Flash, & InDesign
- Hand Fabrication
- Illustration and Drafting

Technical:

- Java, Python, C# in Unity, Processing
- 3DS Max for Rendering and Animation
- HTML, CSS, JavaScript
- Digital Fabrication (CNC, 3D Printing, Laser Cutting)

Language Skills

Verbal fluency in English, Chinese, and Spanish, Literacy in English and Spanish

Leadership and Honors

President, MIT Women's Volleyball Club (2016 - present)

Vice President, Alpha Epsilon Phi (2015 - 2016)

Winner of the Kelly Douglas Travel Fellowship (2015)