

QINGRU MIRAH XU

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EDUCATION

HARVARD UNIVERSITY, Graduate School of Design Cambridge, MA
MASTER IN DESIGN STUDIES, ENERGY AND ENVIRONMENT May 2022

Relevant Courses: Creative Machine Learning for Design; Introduction to Computational Design; Optimizing Façade Performance; Space Conditioning in Low-Carbon Buildings; D-Lab Schools: Building Technology; Environmental System

BOSTON UNIVERSITY, School of Engineering Boston, MA
BACHELOR OF SCIENCE, COMPUTER ENGINEERING May 2018

2018 Best Capstone Project Award in Electrical & Computer Engineering: COMPOS

Relevant Courses: Introduction to Artificial Intelligence; Electric Energy System: Adapting to Renewable Resources; Engineering Mechanics

COMPUTER SKILLS

DESIGN SOFTWARE	Rhino, SketchUp, Sketch, InVision, and Adobe Creative Suite
SIMULATION SOFTWARE	Ladybug Tools, DIVA, CONTAM, FloVent, Climate Studio, Design Builder, and UMI
COMPUTER LANGUAGE	C#, C++, Python, MATLAB, HTML5, CSS, XML, Vue.js, and .NET
DEVELOPMENT ENVIRONMENT	Grasshopper, Unreal Engine, Unity, Android Studio, Xcode, and Visual Studio

WORK EXPERIENCE

TRANSSOLAR INC New York, NY
Climate Engineer Intern Jun 2020 – Aug 2020

- Designed and researched a multitude of sustainable strategies and simulations on the buildings and cities scale
- Designed and compiled client reports using Adobe Illustrator, InDesign, and PowerPoint

HARVARD UNIVERSITY Cambridge, MA
Research Assistant - Center of Green Buildings and Cities Jan 2020 – May 2020

- Assisted with a case study and consulting project for energy performance at a university in Saudi Arabia

Technical Assistant – Fabrication Lab Sept 2020 – Current

- Developing and designing virtual campus UI & UX with Unreal Engine and Adobe XD
- Developed an online virtual 3D printer in Unity for simulation and teaching purposes
- Assisted patrons and students in developing gcode, 3D printing, and laser cutting

BOSTON PUBLIC SCHOOL Boston, MA
STEM Teacher April 2019 – June 2019

- Instructed and assisted in block coding classes for Grade 3 and 6 at various elementary schools
- Instructed, troubleshot, and assisted in 3D printing classes for Grade 6 at Orchard Gardens School

ACADEMIC PROJECTS

cGan Daylight Factor in Office Space | Massachusetts Institute of Technology

Designer and Developer | Python, DIVA, Grasshopper May 2020

- Designed and developed grasshopper scripts for evaluating floorplan's daylight quality using Pix2Pix algorithm
- Generated dataset by simulating daylighting qualities in 60 distinctive floorplans and 2160 models

Optimizing Boston John Hancock Tower Façade | Harvard University

Sustainable Designer and Climate, Daylight, and Wind Analyst | Ladybug Tools, DIVA Dec 2019

- Developed and redesigned facade to leverage natural ventilation and daylight while avoiding glare issues with climate data
- Simulated wind tunnel test of existing design and new strategies to mitigate hostile street environment

GreenForm | Harvard University

Lead Design and Developer | C#, Grasshopper Dec 2019

- Designed and developed automatic geometries generation, performance evaluation, and scoring metrics
- Generated graphics of geometries and associated environmental scores

GH# | Harvard University

Code Reviewer and Developer | C#, Grasshopper Dec 2019

- Oversaw project to refine function definitions and behaviors for performance, consistency, and readability
- Implemented C# scripts that imitate native Grasshopper surface components for educational purposes