

EDUCATION

NORTH CAROLINA STATE UNIVERSITY Ph.D. in Design GPA: 4.0/4.0	2021 - Present
YALE UNIVERSITY Master of Architecture GPA: N/A	2019 - 2021
NORTH CAROLINA STATE UNIVERSITY Bachelor of Architecture GPA: 3.82/4.0; Dean's List 2014-2019	2014 - 2019

SKILLS

Programming: Python (Scikit-learn, NumPy, Pandas, Matplotlib), SQL

Software: Rhino&Grasshopper, EnergyPlus, V-Ray, AutoCAD, 3ds Max, Maya, InDesign, Photoshop, After Effects, Premiere

PROFESSIONAL EXPERIENCE

Building Energy Technology Laboratory (BETlab) - Raleigh, NC

Research Assistant

8/2021 - 12/2021

- Implemented machine learning algorithms (Random Forest & Artificial Neural Networks) via Python to predict the energy consumption in different houses within the database, which has 5870 samples, and each of the samples contains 8 data points. Achieved 83% accuracy via Random Forest and 96% accuracy via Neural Networks.
- Designing Reinforcement Learning algorithms to find the optimized solutions for the control logic within the building automation systems.

HARVARD UNIVERSITY CAMLab - Cambridge, MA

Technical Advisor

2/2021 - 8/2021

- Created a detailed 3D model of an ancient wooden pagoda built in 1056. The survey data was published in 1966. The original model contained > 60,000 pieces and was later optimized into about 20,000 pieces, which maintained the model's accuracy while dramatically reducing the size of the ram needed for the following operations.
- Developed a series of animations using Python and C#. The control logic of the movement and the timeline were developed in Python, and the display controls were written in C#. Developed a pipeline within Rhino that turned the B-rep objects into meshes, which made the rendering process 20 times more efficient.

YALE UNIVERSITY OFFICE OF FACILITIES - New Haven, CT

Architectural/Engineering Student Intern

10/2019 - 2/2020

- Created a series of 3D models and renderings to visualize the design proposals for the team.

SUZHOU UNIVERSITY OF SCIENCE AND TECHNOLOGY - Suzhou, China

Guest Lecturer

6/10/2018 - 7/10/2018

- Taught the foundation of visual programming, which included the basic operations that are embedded in the parametric tools, and the fundamental algorithms that have been widely used in 3d Moldings.
- Introduction to data visualization in the 3D environment.

UNIVERSITY PROJECTS

AIR QUALITY INDEX ANALYSIS

- Collected the air quality data in a group of major cities in China before and after the COVID outbreak.
- Analyzed the relationship between the ruthless lockdowns and air quality in China with python (packages: pandas, sk-learn...), and concluded the possible reasons related to the changes in air quality over the past years.

EXHIBITION

VENICE BIENNALE 2018 Venice, Italy Time Space Existence 5/26/2018 - 11/25/2018