JINGWEN ZHANG

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EDUCATION

University of Pennsylvania
Master of Science in Design
(Advanced Architectural Design)

AUG 2023 – AUG 2024

Tsinghua University
Bachelor of Architecture
Minor: Bachelor of Fine Art, Product Design

AUG 2018 – MAY 2023

RESEARCH EXPERIENCE

Cornell University
Research Aide – Urbano Platform Project

NOV 2024 – PRESENT

Developed ONNX-based behavioral models for the Urbano platform, a multi-scale urban mobility simulation framework.

- **Model Training:** Redesign and optimize model training pipelines (Person Type, Trip, Activity, Mode-Duration, Start Hour) across seven U.S. states.
- **Tool Development:** Developed and maintained Grasshopper components (ImportTerrain, DownloadClimateData, SimulationConfig) for automated data acquisition and visualization.
- **Model Validation:** Built iterative simulation and validation framework to quantify model accuracy against observed behavioral datasets.

Tsinghua University – Thesis Project

FEB 2023 – JUN 2023

- **Research Focus:** Daylight Fairness in Architecture
- Studied daylight fairness in classroom and environmental comfort through data simulation and regression modeling.
- Built a parametric daylight simulation pipeline (Rhino + ClimateStudio) processing 480,000 hourly illuminance samples and producing 50,000 normalized records.
- Proposed a "Daylight Equity Index" based on weighted utility models to measure fairness in indoor lighting.

Tsinghua University — Interactive Design Studio
Project: *Blind New World Interactive Installation Project*

OCT 2021 – DEC 2021

- Designed multi-user immersive installation using Arduino and projection mapping to study perception and interaction.
- Built layered color projection and tangible controller for differentiated user experiences.
- Conducted surveys and behavioral observation for mixed-method evaluation.

TECHNICAL SKILLS

Programming: Python, C#, Arduino, C, PostgreSQL (data query)
Data Analysis: SPSS, Excel
Modeling & Simulation: Grasshopper, Rhinoceros, Houdini, SketchUp
Visualization & Rendering: Vray, Blender, Keyshot, Adobe Suite
Fabrication: 3D Printing, CNC, Robotic Fabrication, Laser Cutting, Thermal Forming

HONORS & LEADERSHIP EXPERIENCE

2021 Solar Decathlon China (SDC)– *Team Member of Team THU*
AUG 2022
Third Place Winner | Work with Most Potential for Sustainable Development

Tsinghua Alumni – Longhu Scholarship
OCT 2022
For Outstanding Academic Performance

Tsinghua University Scholarship & Financial Aid from Huang Yicong Foundation
DEC 2021
For Well-rounded Excellence Students

Tsinghua University Scholarship
DEC 2020
For Outstanding Performance in Art and Recreation

Director, Art and Recreation Department, Student Council, School of Architecture
DEC 2019 – JAN 2021

Leader, Graphic Design Team, Student Council, Tsinghua University
FEB 2020 – JAN 2021

PUBLICATION

Publication City Data Analysis and Visualization
Scenes of Beijing: Landscapes and Natural Beauty. Beijing United Publishing Co.,Ltd, 2023.