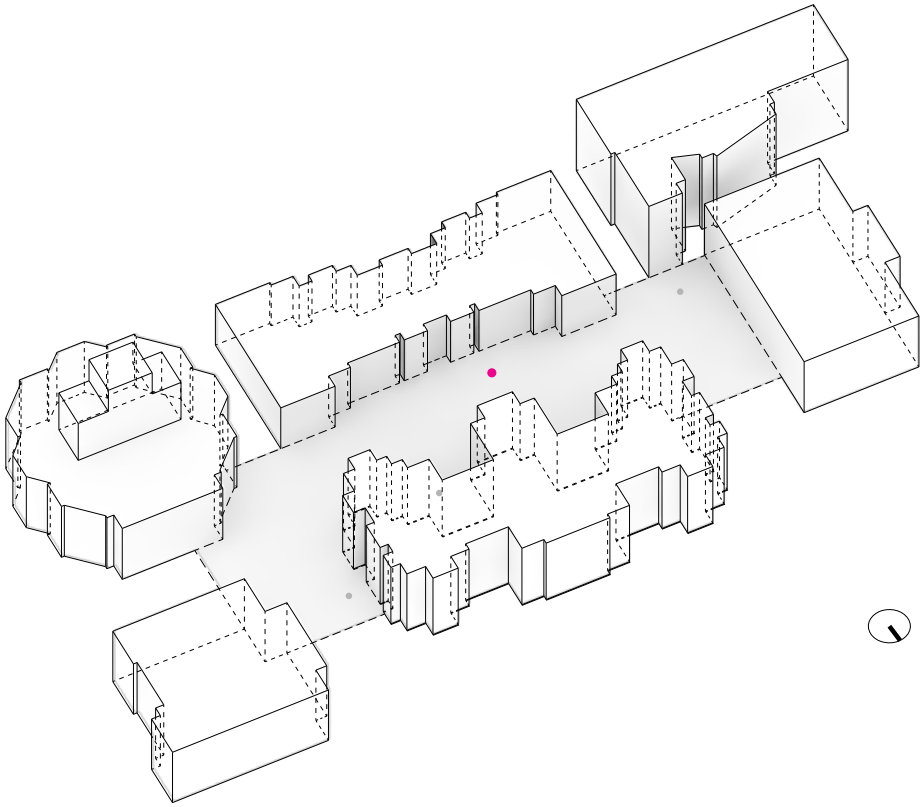
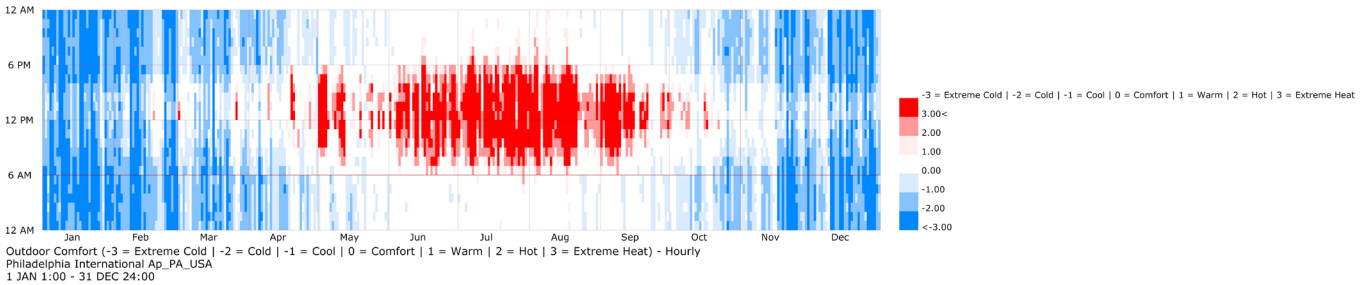
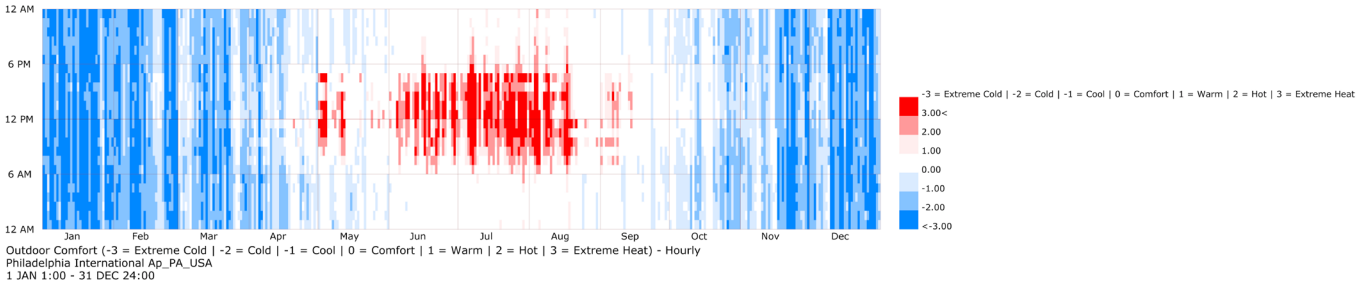
Assignment-
05_annual_comfort_map

Shih-Kai Lin

Location 1







Local Situation in the Context:

Design Idea 1

Percent of Time Comfortable: **37.39%**

Percent Heat Stress: 7.36%

Percent Cold Stress: 35.1%

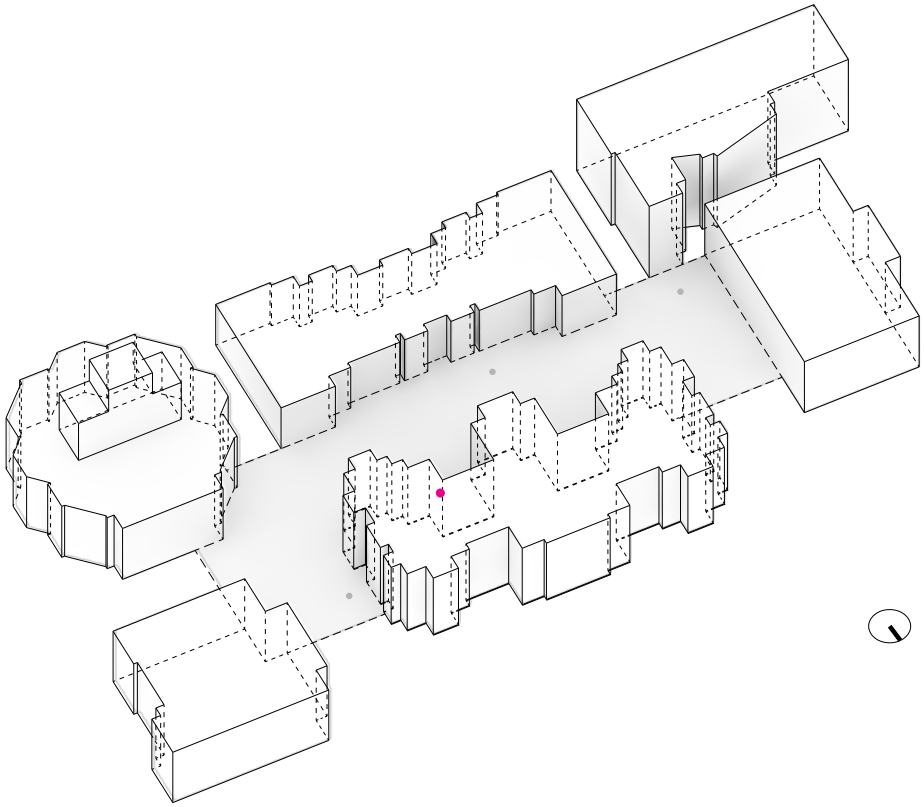
Global Situation in Philly:

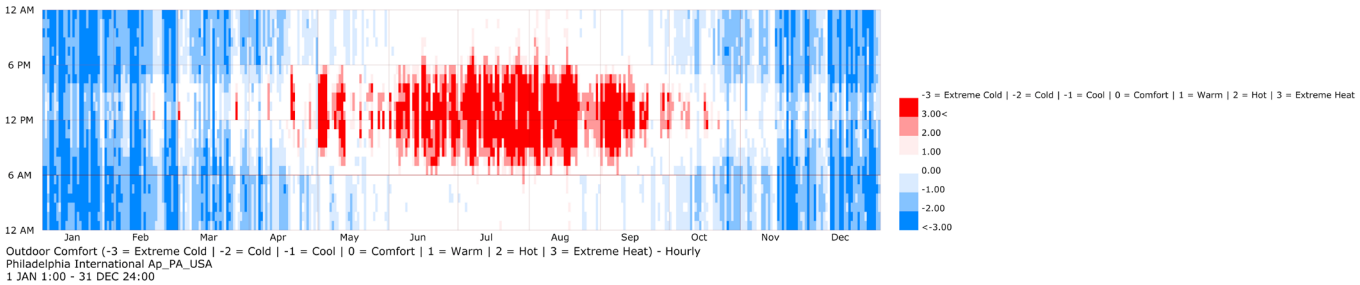
Percent of Time Comfortable in Philly: 37.34%

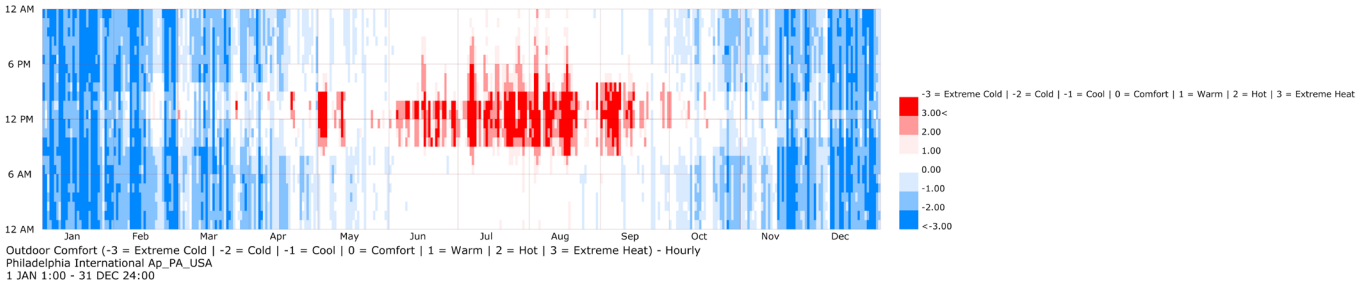
Percent Heat Stress: 12.51%

Percent Cold Stress: 31.64%

Location 2







Local Situation in the Context:

Design Idea 2

Percent of Time Comfortable: **40.25%**

Percent Heat Stress: 7.00%

Percent Cold Stress: 32.77%

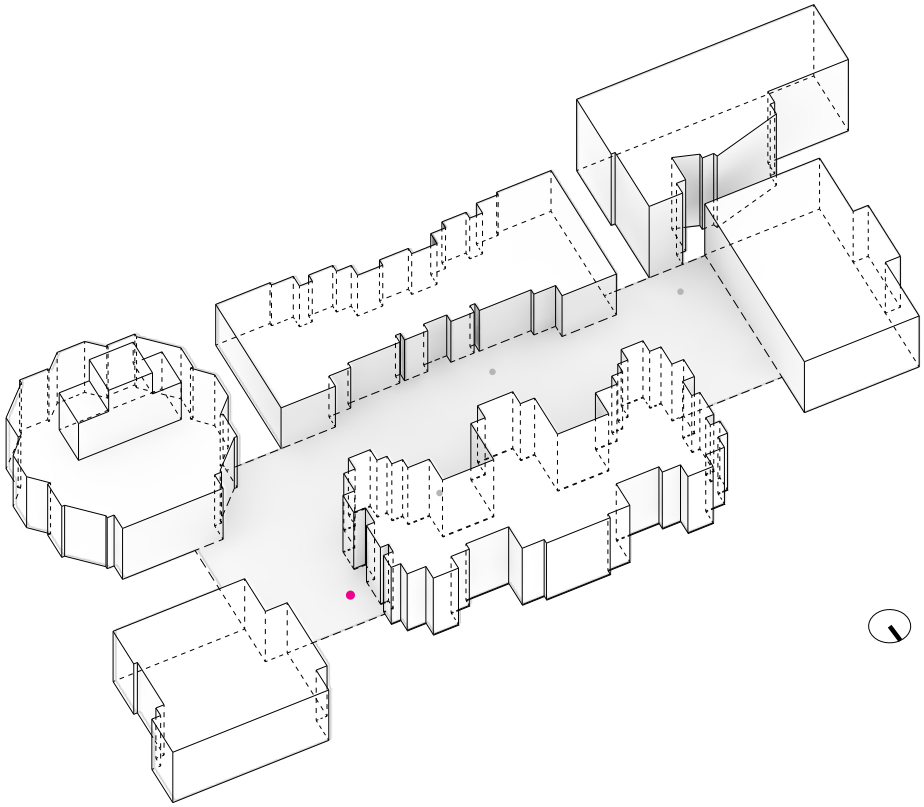
Global Situation in Philly:

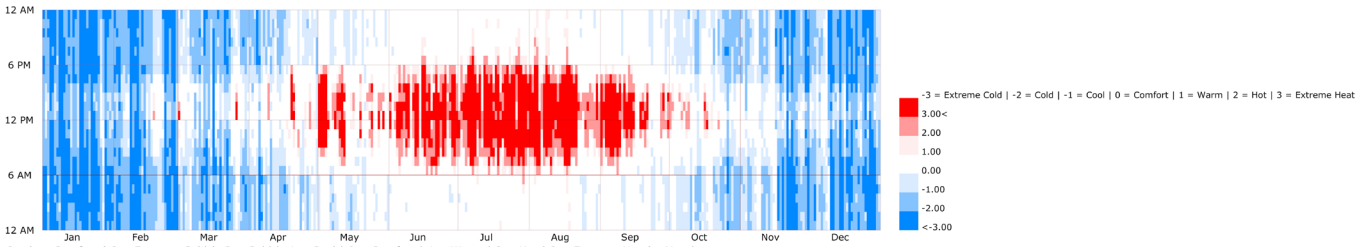
Percent of Time Comfortable in Philly: 37.34%

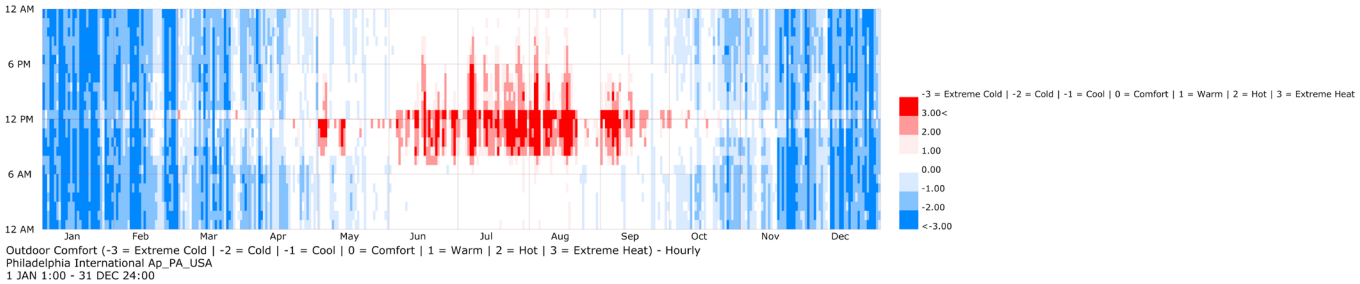
Percent Heat Stress: 12.51%

Percent Cold Stress: 31.64%

Location 3







Local Situation in the Context:

Design Idea 3

Percent of Time Comfortable: **39.73%**

Percent Heat Stress:6.45%

Percent Cold Stress: 33.66%

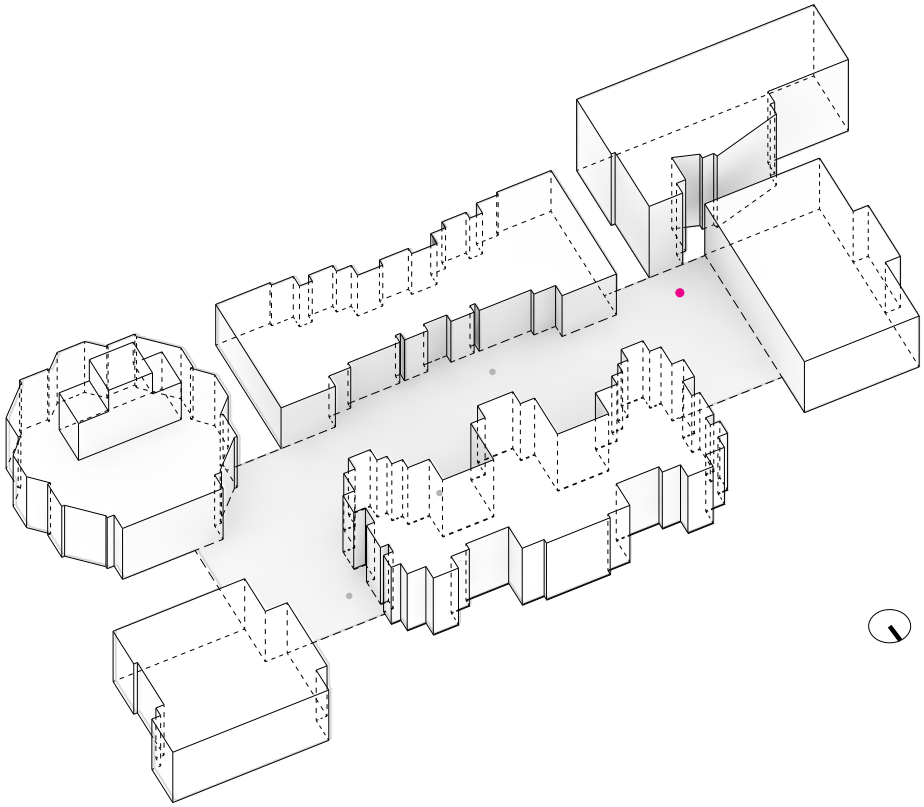
Global Situation in Philly:

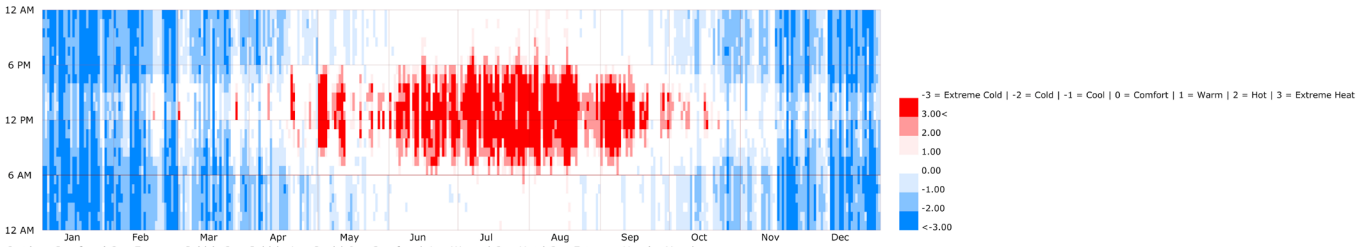
Percent of Time Comfortable in Philly: 37.34%

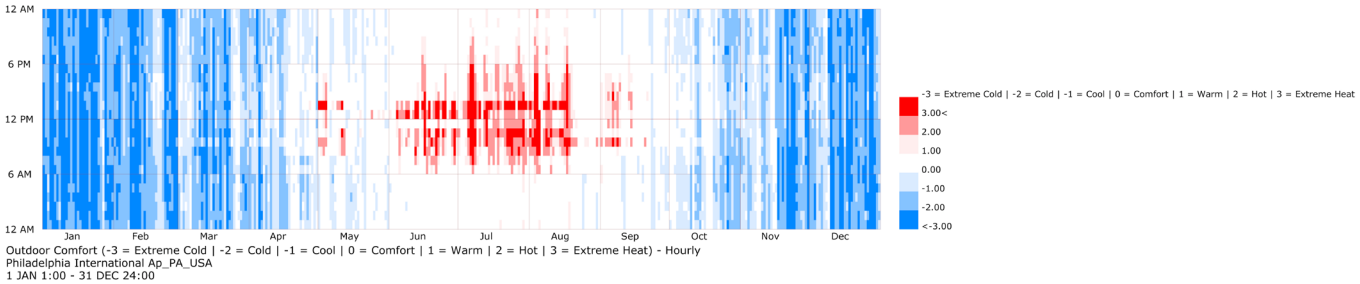
Percent Heat Stress: 12.51%

Percent Cold Stress: 31.64%

Location 4







Local Situation in the Context:

Design Idea 3

Percent of Time Comfortable: **39.15%**

Percent Heat Stress: 5.38%

Percent Cold Stress: 35.01%

Global Situation in Philly:

Percent of Time Comfortable in Philly: 37.34%

Percent Heat Stress: 12.51%

Percent Cold Stress: 31.64%

Summary

What was your thinking process to find the best location?
- I was mainly trying to find a location with surrounding buildings that keeps it from direct sunlight.

What is the difference between the best and the worst locations?
- The difference between two location is the enclosure of the location by surrounding buildings.

What are the effective parameters that makes the best location perform better than other spots?
- The location with the building shading from more directions performs better in terms of the percentage of time comfortable.

What are the main limitations of the current simulation method for your study?
- The simulation doesn't include the wind condition for consideration. And since wind condition also contributes a lot to the comfort of the seating area, lack of the consideration of wind might limit the simulation method for the study.