

PA4 Results

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The 3 worst HVAC systems, based on all available data.

Here, the result is the building number associated with the average difference between the set temperature and the actual temperature, sorted descending by the average difference. Buildings 1, 17, and 15 have the worst averages.

output1 (“worst” systems)

Building	Average Temperature Difference
1	6.865196078
17	6.850855746
15	6.800511509
18	6.777464789
6	6.690537084
13	6.663291139
10	6.652278177
7	6.641148325
4	6.640776699
3	6.594202899
5	6.582125604
20	6.554644809
8	6.549295775
2	6.480818414
14	6.45368171
9	6.450777202
12	6.404432133
16	6.385964912
19	6.287841191
11	6.153664303

The 3 hottest buildings, based on all available data, during normal business hours.

Here, the data was filtered to only include hours between 9:00 AM and 5:00 PM. Then, all hours were averaged together to get an overall hottest metric. Additionally, for each building, each hour over all gathered days were averaged together to obtain a temperature over time dataset. For sake of brevity, only the top 3 hottest temperature over time is shown below. The entire produced dataset can be found in `output2b`. The plot shows `output2b`, with trendlines in a lighter color.

`output2a` (overall hottest buildings)

Building	Average Temperature
19	69.43506494
2	68.92465753
7	68.2972973
6	68.22093023
10	68.16339869
12	68.11842105
14	68.11724138
4	68.07246377
8	67.87096774
5	67.80745342
15	67.73333333
11	67.62698413
17	67.45341615
3	67.31506849
16	67.30769231
13	67.29012346
1	67.17073171
18	67.06024096
20	66.75483871
9	66.52413793

`output2b` (abbreviated - hottest buildings over time)

Building	Hour	Average Temperature
2	9	67.89473684
2	10	67.36363636
2	11	67.42857143
2	12	70.68181818
2	13	74
2	14	73.53846154
2	15	65.44444444
2	16	67.04761905
2	17	70.5
7	9	68.29411765
7	10	68.125
7	11	68.45454545
7	12	67.6875
7	13	66
7	14	67.875
7	15	69.2
7	16	70.07692308
7	17	69.05555556
19	9	69
19	10	68.125
19	11	68.71428571
19	12	69.54545455
19	13	70.31818182
19	14	69.72727273
19	15	71.0625
19	16	70.94444444
19	17	66.09090909

Average Building Temperatures

