

# Supplementary Material: Predicting Site Energy Usage Intensity using Machine Learning Models

**Table S1.** Description of the dataset attributes used during our experimentations.

Feature name		Description	Total values	No. missing values	Min value	Max value	Std dev	Mean
Year_Factor		Observation year of weather and energy usage (anonymous)	75757	0	x	x	x	x
State_Factor		State location of the building (anonymous)			x	x	x	x
building_class		Building classification			x	x	x	x
facility_type		Building usage type			x	x	x	x
floor_area		Building floor area (in square feet)			9.43e02	6.39e06	2.47e5	1.66e05
year_built		Construction year of building	73920	1837	1600	2015	37.05	1952
energy_star_rating		Building energy star rating	49048	26709	0.00	100.00	28.66	61.05
ELEVATION		Building elevation	75757	0	-6.40	1924.5	60.66	39.51
January	Min_temp	Building min temperature (in Fahrenheit) in January			-6.40	49	9.38	11.43
	Avg_temp	Building avg temperature (in Fahrenheit) in January			10.81	64.76	7	34.31
	Max_temp	Building max temperature (in Fahrenheit) in January			42.00	91.00	5.36	59.05
February	Min_temp	-			-13.00	48.00	12.58	11.72
	Avg_temp	-			13.25	65.11	8.87	35.53
	Max_temp	-			38.00	89.00	8.41	58.49
March	Min_temp	-			-9.00	52.00	10	21.61
	Avg_temp	-			25.85	69.76	6.57	44.47
	Max_temp	-			53.00	95.00	7.68	70.90
April	Min_temp	-			15.00	52.00	5.58	32.04
	Avg_temp	-			40.28	54.77	2.50	53.78
	Max_temp	-			62.00	104.00	4.10	82.66
May	Min_temp	-			23.00	58.00	4.20	44.71
	Avg_temp	-			46.95	82.11	2.79	63.74
	Max_temp	-			64.00	112.00	2.86	88.99
June	Min_temp	-			30.00	68.00	3.42	51.13

	Avg_ temp	-			54.10	89.55	2.86	71.07
	Max_ temp	-			67.00	119.00	3.60	91.40
July	Min_ temp	-			37.00	74.00	4.18	60.57
	Avg_ temp	-			54.82	94.44	4.09	76.60
	Max_ temp	-			65.00	117.00	4.16	95.54
August	Min_ temp	-			31.00	77.00	4.44	58.52
	Avg_ temp	-			56.69	94.90	3.82	75.35
	Max_ temp	-			66.00	116.00	4.14	92.57
September	Min_ temp	-			26.00	65.00	4.29	50.79
	Avg_ temp	-			53.60	90.12	3.60	69.59
	Max_ temp	-			64.00	111.00	5.01	92.17
October	Min_ temp	-			18.00	61.00	5.09	38.21
	Avg_ temp	-			44.69	80.74	2.64	58.73
	Max_ temp	-			59.00	108.00	5.58	81.14
November	Min_ temp	-			4.00	52.00	4	28.63
	Avg_ temp	-			4.09	67.42	4.09	48.12
	Max_ temp	-			53.00	96.00	4.37	71.20
December	Min_ temp	Building temperature (in Fahren- heit) in December			-16.00	44.00	9.01	22.74
	Avg_ temp	Buidling avg temperature (in Fahr- enheit) in December			23.79	61.79	5.87	41.63
	Max_ temp	Building max temperature (in Fahr- enheit) in December			42.00	86.00	6.05	64.49
cool- ing_degree_days	No. of degrees where the daily av- erage Temp exceeds 65°F				0	4948.00	391.56	1202.25
heat- ing_degree_days	No. of degrees where the daily av- erage Temp falls under 65°F				398.00	7929.00	824.37	4324.96
precipita- tion_inches	Annual precipitation at building location (in inch)				0	107.69	824.37	4324.96
snowfall_inches	Annual snowfall at building loca- tion (in inch)				0	127.30	10.59	42.43
snow- depth_inches	Annual snow depth at building lo- cation				0	1292.00	175.27	167.86

avg_temp	Annual avg Temp at building location			44.51	77.25	2.24	56.18
days_below_30F	No. of days bellow 30°F at building location			0	170	27.59	48.76
days_below_20F	No. of days bellow 20°F at building location			0	93.00	14.47	17.45
days_below_10F	No. of days bellow 10°F at building location			0	59.00	7.071	4.87
days_below_0F	No. of days bellow 0°F at building location			0	31.00	2.89	0.88
days_above_80F	No. days above 80°F at building location			0	260	82.71	25.28
days_above_90F	No. days above 90°F at building location			0	185	14.059	10.944
days_above_100F	No. days above 100°F at building location			0	119	0.280	2.252
days_above_110F	No. days above 110°F at building location			0	16	0.002	0.142
direction_max_wind_speed	Wind direction for max wind speed at building location	34675	41082	1.00	360.00	66.55	131.15
direction_peak_wind_speed	Wind direction for peak wind gust speed at building location	33946	41811	1.00	360.00	62.78	130.31
max_wind_speed	Max wind speed at building location	34675	41082	1.00	360.00	4.20	6.46
days_with_fog	No. of days with fog at building location	29961	45796	1.00	360.00	109.14	50.70
site_eui	Energy usage intensity of site (utility bills)	75757	0	1.00	997.87	82.58	58.26
id	Id of the building			x	x	x	x

("X") Not applicable

("- ") Similar to the above cell