

2019 Models

Kolkata

First Half of the Year (Pollutant Levels On Weather Parameters)

term	SO2	NO2	CO	O3	PM10	PM25
(Intercept)	−369.15*** [−682.7, −55.59]	−448.75* [−913.45, 15.94]	207.15* [−43.7, 458.01]	4.98 [−316.22, 326.18]	1138.03 [−2592.92, 4868.98]	−1766.28* [−3675.66, 143.11]
dew	−2.58*** [−3.06, −2.1]	−5.03*** [−5.74, −4.32]	−2.24*** [−2.63, −1.86]	−2.27*** [−2.76, −1.78]	−30.95*** [−36.67, −25.24]	−16.62*** [−19.55, −13.7]
humidity	0.3*** [0.21, 0.39]	0.7*** [0.57, 0.83]	0.38*** [0.31, 0.45]	0.33*** [0.24, 0.42]	4.07*** [3.03, 5.11]	2.81*** [2.28, 3.34]
pressure	0.36*** [0.05, 0.66]	0.44* [−0.01, 0.9]	−0.21* [−0.45, 0.04]	−0.02 [−0.34, 0.29]	−1.11 [−4.77, 2.55]	1.85* [−0.02, 3.72]
temperature	2.11*** [1.68, 2.53]	3.31*** [2.68, 3.95]	1.25*** [0.9, 1.59]	2.09*** [1.65, 2.53]	19.66*** [14.57, 24.75]	8.47*** [5.86, 11.07]
wind-speed`	0.61 [−0.56, 1.78]	0.2 [−1.53, 1.94]	−1.02* [−1.95, −0.08]	1.01* [−0.19, 2.21]	−29.22*** [−43.15, −15.29]	−11.98*** [−19.11, −4.85]
R2	0.74	0.81	0.67	0.71	0.59	0.73

*** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$; 99% confidence Intervals

Second Half of the Year (Pollutant Levels on Weather Parameters)

term	SO2	NO2	CO	O3	PM10	PM25
(Intercept)	−6.23 [−46.98, 34.52]	4.11 [−30.53, 38.74]	3.31 [−19.59, 26.21]	−25.08 [−62.4, 12.24]	319.14 [−92.31, 730.6]	70.43 [−145.97, 286.83]
dew	−3.5*** [−4.13, −2.88]	−4.12*** [−4.66, −3.59]	−2.29*** [−2.64, −1.94]	−3.46*** [−4.03, −2.88]	−43.33*** [−49.64, −37.01]	−20.58*** [−23.91, −17.26]
humidity	0.31*** [0.17, 0.45]	0.47*** [0.35, 0.6]	0.29*** [0.21, 0.37]	0.4*** [0.27, 0.53]	4.04*** [2.6, 5.48]	2.35*** [1.59, 3.11]
pressure	0.02 [−0.02, 0.06]	0.01 [−0.02, 0.04]	0 [−0.02, 0.02]	0.03* [−0.01, 0.06]	−0.13 [−0.52, 0.26]	0.07 [−0.13, 0.27]
temperature	2.07*** [1.47, 2.66]	2.38*** [1.88, 2.88]	1.26*** [0.93, 1.59]	2.25*** [1.71, 2.8]	24.34*** [18.36, 30.32]	10.38*** [7.23, 13.52]
wind-speed`	1.86*** [0.62, 3.11]	1.55*** [0.5, 2.61]	1.1*** [0.4, 1.8]	2.51*** [1.37, 3.65]	−2.37 [−14.94, 10.2]	6.45* [−0.16, 13.06]
R2	0.48	0.65	0.6	0.61	0.49	0.52

*** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$; 99% confidence Intervals

Delhi

First Half of the Year (Pollutant Levels On Weather Parameters)

term	SO2	NO2	CO	O3	PM10	PM25
(Intercept)	10.83 [−18.16, 39.82]	−60.93* [−117.13, −4.73]	−19.1 [−95.96, 57.77]	−11.09 [−102.54, 80.37]	−205.89 [−764.27, 352.48]	−308.94*** [−580.61, −37.26]
dew	−0.54*** [−1.03, −0.04]	−2.36*** [−3.32, −1.4]	−1.21* [−2.52, 0.1]	1.05 [−0.51, 2.61]	−6.1 [−15.62, 3.42]	−8.58*** [−13.21, −3.95]
humidity	0.12*** [0.04, 0.19]	0.38*** [0.25, 0.52]	0.31*** [0.12, 0.5]	0.21* [−0.02, 0.43]	1.6*** [0.22, 2.98]	2.39*** [1.72, 3.07]
pressure	−0.02 [−0.05, 0.01]	0.04* [−0.01, 0.1]	0 [−0.07, 0.08]	−0.03 [−0.12, 0.07]	0.14 [−0.42, 0.7]	0.35*** [0.07, 0.62]
temperature	0.73*** [0.46, 1.01]	1.86*** [1.32, 2.39]	0.93*** [0.21, 1.66]	0.98*** [0.11, 1.85]	7.46*** [2.17, 12.75]	4.42*** [1.85, 6.99]
wind-speed`	3.71*** [3.02, 4.41]	6.72*** [5.37, 8.06]	6.58*** [4.74, 8.42]	8.41*** [6.22, 10.6]	56.52*** [43.16, 69.87]	14.51*** [8.01, 21.01]
R2	0.79	0.8	0.6	0.67	0.67	0.59

*** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$; 99% confidence Intervals

Second Half of the Year (Pollutant Levels on Weather Parameters)

term	SO2	NO2	CO	O3	PM10	PM25
(Intercept)	15.17 [−31.05, 61.39]	−35.58*** [−65.79, −5.37]	0.38 [−39.9, 40.66]	−14.33 [−89.54, 60.88]	201.44* [−36.03, 438.9]	100.3* [−26.11, 226.71]
dew	−4.11*** [−5.2, −3.02]	−3.25*** [−3.96, −2.54]	−2.72*** [−3.66, −1.77]	−6.1*** [−7.87, −4.33]	−38.95*** [−44.54, −33.37]	−19.41*** [−22.38, −16.44]
humidity	0.38*** [0.12, 0.64]	0.54*** [0.37, 0.71]	0.4*** [0.18, 0.63]	0.85*** [0.43, 1.27]	3.55*** [2.22, 4.88]	2.03*** [1.32, 2.74]
pressure	−0.03 [−0.09, 0.03]	0 [−0.04, 0.04]	−0.03 [−0.08, 0.02]	−0.06 [−0.16, 0.03]	−0.37*** [−0.66, −0.07]	0.01 [−0.15, 0.17]
temperature	3.32*** [2.32, 4.32]	3.36*** [2.71, 4.02]	2.67*** [1.81, 3.54]	6.54*** [4.92, 8.16]	34.16*** [29.04, 39.28]	11.85*** [9.12, 14.57]
wind-speed`	1.15 [−0.53, 2.84]	2.73*** [1.63, 3.83]	3.22*** [1.75, 4.69]	6.44*** [3.7, 9.18]	8.7* [0.05, 17.35]	0.21 [−4.39, 4.82]
R2	0.33	0.7	0.45	0.55	0.63	0.55

*** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$; 99% confidence Intervals

First Half of the Year (Pollutant Levels on Other Pollutant Levels)

term	SO2	NO2	CO	O3	PM10	PM25
(Intercept)	−1.94* [−3.79, −0.08]	0.66 [−2.37, 3.69]	−2.58*** [−3.68, −1.49]	4.89*** [2.46, 7.32]	−41.2*** [−57.61, −24.79]	74.11*** [66.73, 81.48]
SO2	NA	0.84*** [0.69, 1]	0.1*** [0.03, 0.17]	0.35*** [0.2, 0.49]	0.42 [−0.6, 1.45]	−0.17 [−0.84, 0.5]
NO2	0.32*** [0.26, 0.38]	NA	0.06*** [0.02, 0.11]	0.16*** [0.07, 0.25]	−0.06 [−0.7, 0.57]	0.83*** [0.42, 1.23]
CO	0.27*** [0.09, 0.45]	0.45*** [0.16, 0.75]	NA	0.53*** [0.29, 0.77]	6.55*** [5.03, 8.07]	2.17*** [1.09, 3.24]
O3	0.2*** [0.11, 0.28]	0.23*** [0.1, 0.37]	0.11*** [0.06, 0.16]	NA	−0.57 [−1.34, 0.2]	−0.25 [−0.75, 0.26]
PM10	0.01 [−0.01, 0.02]	0 [−0.02, 0.02]	0.03*** [0.02, 0.04]	−0.01 [−0.03, 0]	NA	0.32*** [0.26, 0.38]
PM25	0 [−0.02, 0.01]	0.06*** [0.03, 0.09]	0.02*** [0.01, 0.03]	−0.01 [−0.04, 0.01]	0.75*** [0.6, 0.9]	NA
R2	0.83	0.85	0.87	0.67	0.84	0.82

*** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$; 99% confidence Intervals

Second Half of the Year (Pollutant Levels on Other Pollutant Levels)

term	SO2	NO2	CO	O3	PM10	PM25
(Intercept)	−2.79*** [−4.99, −0.6]	3.52*** [2.18, 4.87]	−1.34*** [−2.23, −0.46]	1.11 [−0.89, 3.12]	−50.66*** [−68.65, −32.67]	53.96*** [44.07, 63.86]
SO2	NA	0.12*** [0.05, 0.19]	0.03 [−0.01, 0.08]	0.18*** [0.08, 0.28]	1.61*** [0.68, 2.54]	−0.07 [−0.65, 0.51]
NO2	0.3*** [0.12, 0.47]	NA	0.35*** [0.29, 0.41]	0.42*** [0.26, 0.57]	1.13 [−0.36, 2.62]	1.37*** [0.46, 2.27]
CO	0.2 [−0.07, 0.47]	0.85*** [0.71, 1]	NA	0.36*** [0.12, 0.61]	3.42*** [1.13, 5.72]	2.31*** [0.91, 3.72]
O3	0.22*** [0.1, 0.34]	0.2*** [0.13, 0.28]	0.07*** [0.02, 0.12]	NA	1.48*** [0.45, 2.51]	−0.19 [−0.83, 0.45]
PM10	0.02*** [0.01, 0.04]	0.01 [0, 0.01]	0.01*** [0, 0.01]	0.02*** [0.01, 0.03]	NA	0.22*** [0.16, 0.29]
PM25	0 [−0.02, 0.02]	0.02*** [0.01, 0.03]	0.01*** [0.01, 0.02]	−0.01 [−0.02, 0.01]	0.59*** [0.42, 0.76]	NA
R2	0.69	0.89	0.87	0.77	0.78	0.72

*** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$; 99% confidence Intervals

First Half of the Year (Pollutant Levels on Other Pollutant Levels)

term	SO2	NO2	CO	O3	PM10	PM25
(Intercept)	1.6 [−0.78, 3.97]	−0.16 [−4.85, 4.52]	−5.89* [−12.32, 0.54]	3.86 [−3.42, 11.14]	−43.38*** [−79.16, −7.61]	101.99*** [84.15, 119.84]
SO2	NA	0.82*** [0.58, 1.05]	0.32* [−0.03, 0.68]	1.2*** [0.83, 1.57]	2.44*** [0.48, 4.41]	−0.22 [−1.44, 1.01]
NO2	0.21*** [0.15, 0.27]	NA	0.36*** [0.19, 0.54]	0.08 [−0.13, 0.28]	1.59*** [0.6, 2.58]	1.19*** [0.58, 1.79]
CO	0.04* [0, 0.09]	0.19*** [0.1, 0.28]	NA	0.13* [−0.02, 0.28]	0.24 [−0.49, 0.97]	0.49*** [0.04, 0.93]
O3	0.13*** [0.09, 0.17]	0.03 [−0.05, 0.12]	0.1* [−0.01, 0.22]	NA	1.85*** [1.25, 2.46]	−0.77*** [−1.16, −0.38]
PM10	0.01*** [0, 0.02]	0.03*** [0.01, 0.04]	0.01 [−0.02, 0.03]	0.08*** [0.05, 0.1]	NA	0.28*** [0.21, 0.35]
PM25	0 [−0.02, 0.01]	0.05*** [0.03, 0.08]	0.04*** [0, 0.08]	−0.08*** [−0.12, −0.04]	0.75*** [0.56, 0.93]	NA
R2	0.83	0.84	0.67	0.76	0.84	0.68

*** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$; 99% confidence Intervals

Second Half of the Year (Pollutant Levels on Other Pollutant Levels)

term	SO2	NO2	CO	O3	PM10	PM25
(Intercept)	−4.82* [−10.6, 0.97]	5.31*** [1.58, 9.04]	1.37 [−3.88, 6.62]	2.65 [−6.87, 12.16]	−56.86*** [−81.53, −32.2]	89.21*** [76.06, 102.35]
SO2	NA	0.12*** [0.05, 0.2]	−0.15*** [−0.25, −0.04]	0.54*** [0.36, 0.71]	0.37 [−0.13, 0.87]	0.21 [−0.11, 0.54]
NO2	0.29*** [0.12, 0.47]	NA	0.52*** [0.37, 0.66]	0.98*** [0.72, 1.24]	1.94*** [1.2, 2.68]	0.18 [−0.33, 0.68]
CO	−0.18*** [−0.3, −0.05]	0.27*** [0.19, 0.34]	NA	0.07 [−0.14, 0.27]	1.25*** [0.71, 1.79]	−0.24 [−0.6, 0.12]
O3	0.2*** [0.13, 0.27]	0.15*** [0.11, 0.2]	0.02 [−0.04, 0.08]	NA	0.41*** [0.11, 0.72]	−0.2* [−0.39, 0]
PM10	0.02 [−0.01, 0.05]	0.04*** [0.03, 0.06]	0.05*** [0.03, 0.08]	0.06*** [0.02, 0.1]	NA	0.4*** [0.34, 0.46]
PM25	0.03 [−0.01, 0.07]	0.01 [−0.02, 0.04]	−0.02 [−0.06, 0.01]	−0.06* [−0.13, 0]	0.94*** [0.8, 1.08]	NA
R2	0.49	0.77	0.55	0.65	0.8	0.62

*** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$; 99% confidence Intervals