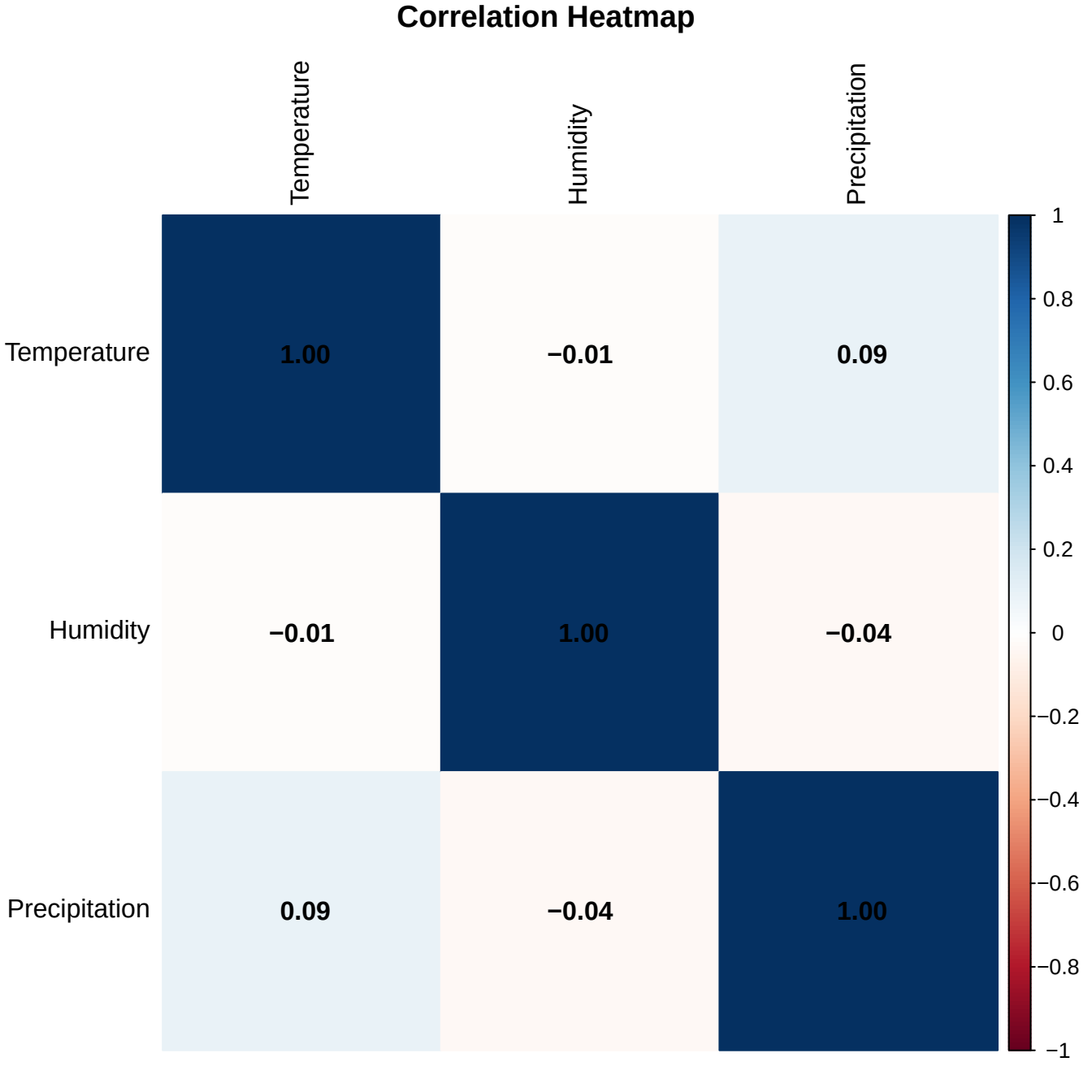
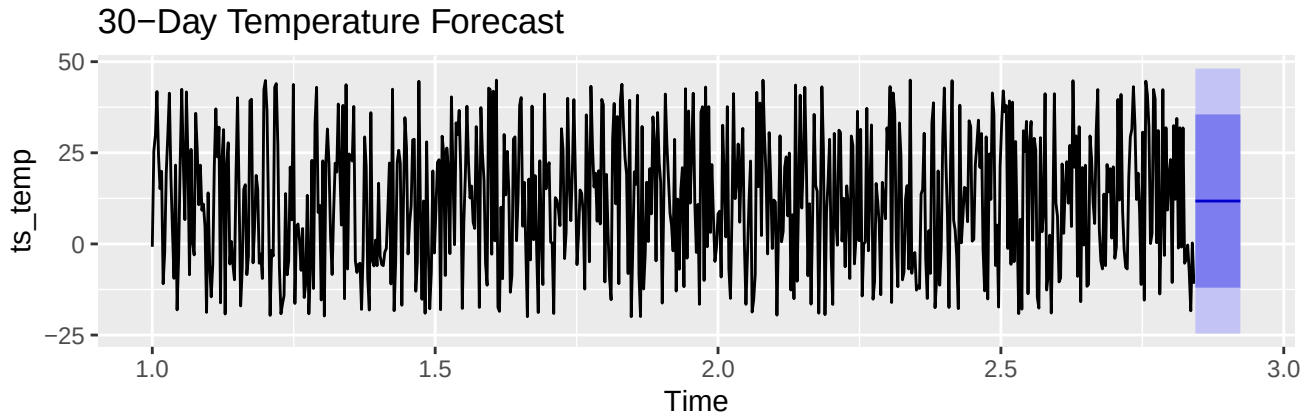
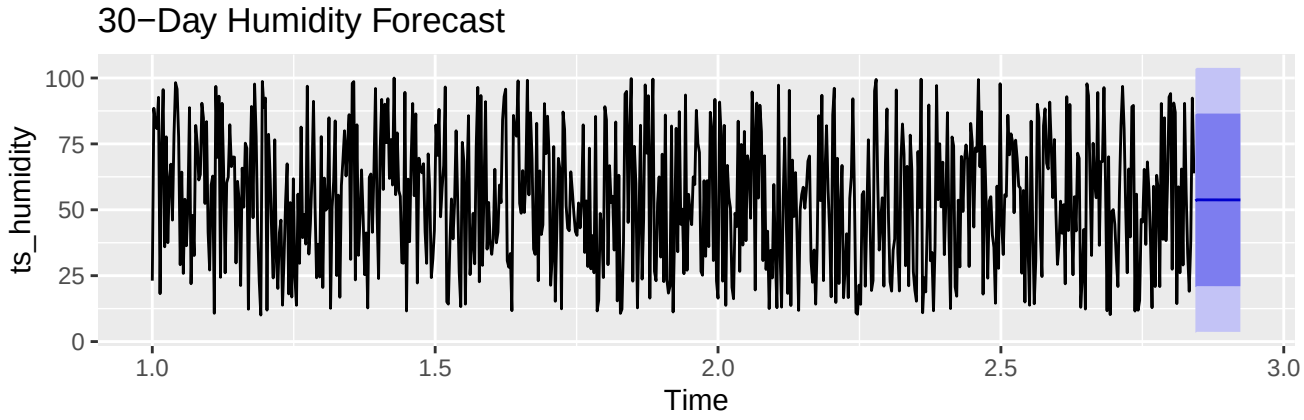
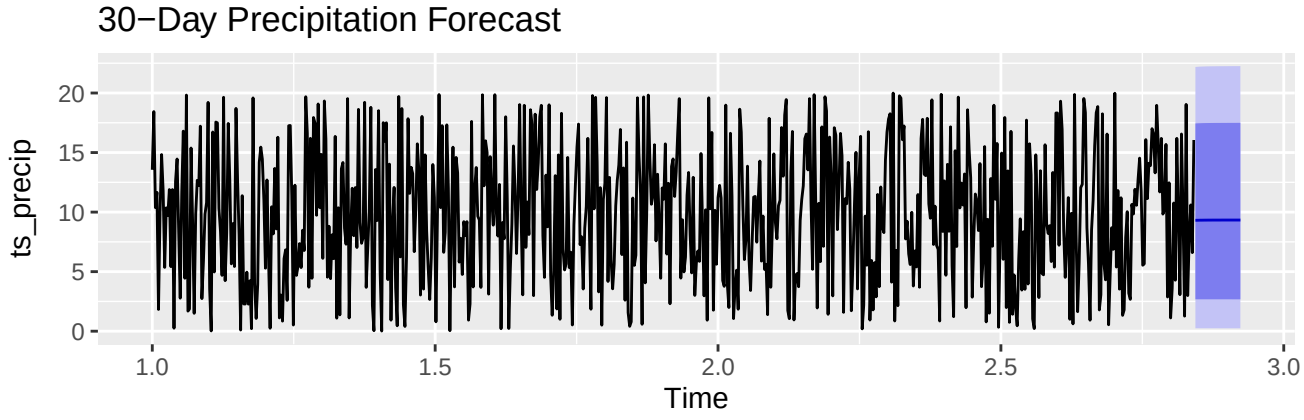
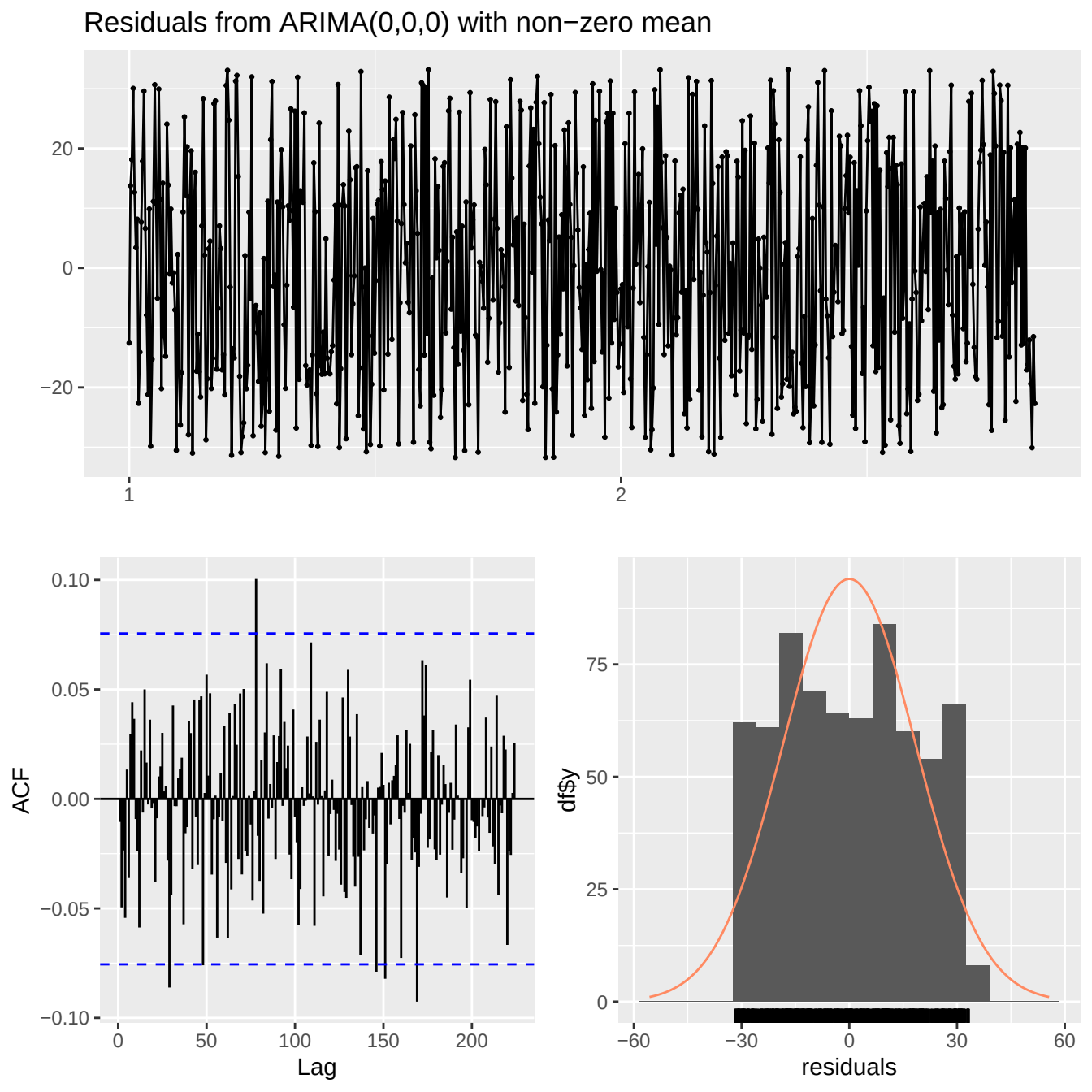
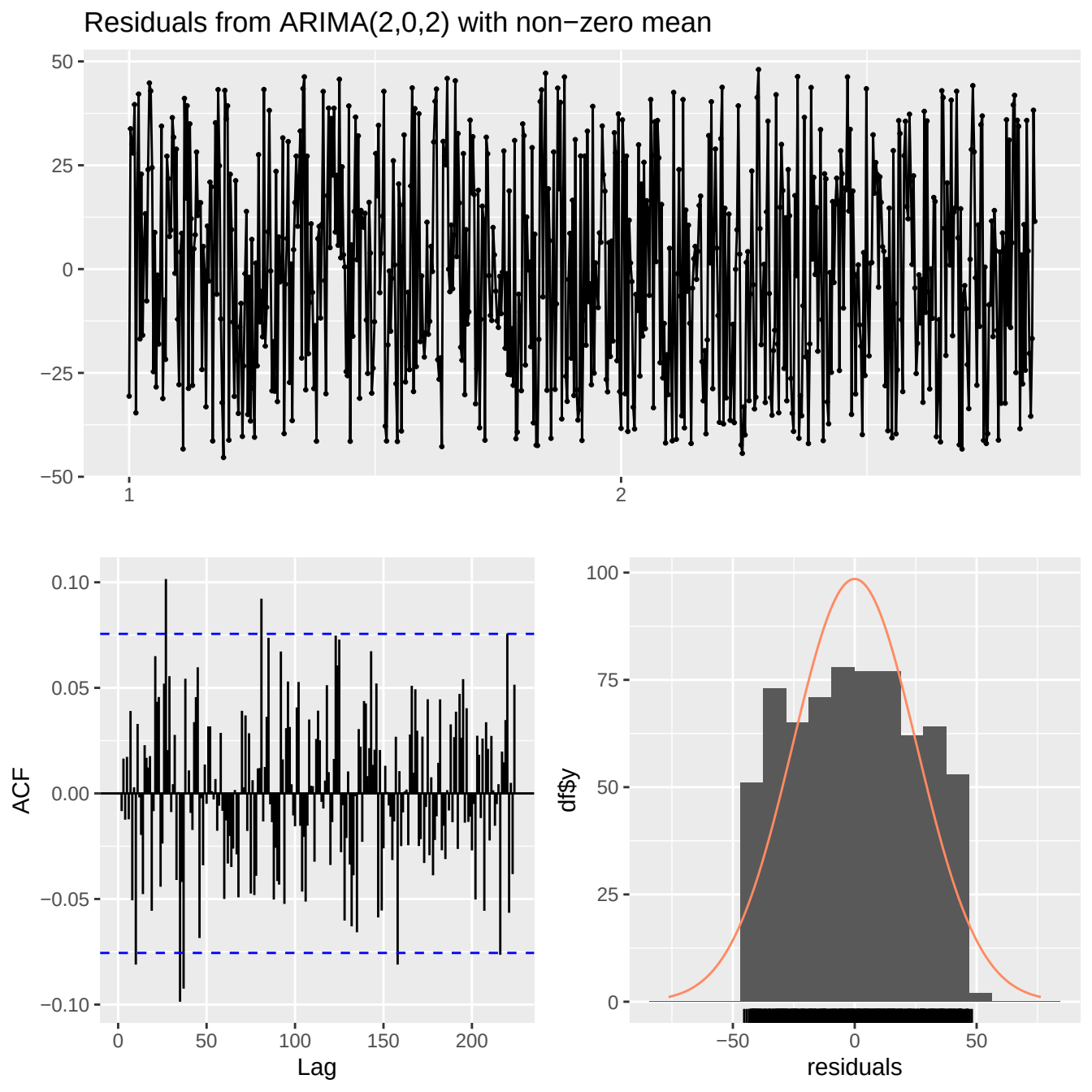

Correlation Heatmap
Temperature
Humidity
Precipitation
Temperature
Humidity
Precipitation
1.00
−0.01
0.09
−0.01
1.00
−0.04
0.09
−0.04
1.00
1
0.8
0.6
0.4
0.2
0
−0.2
−0.4
−0.6
−0.8
−1

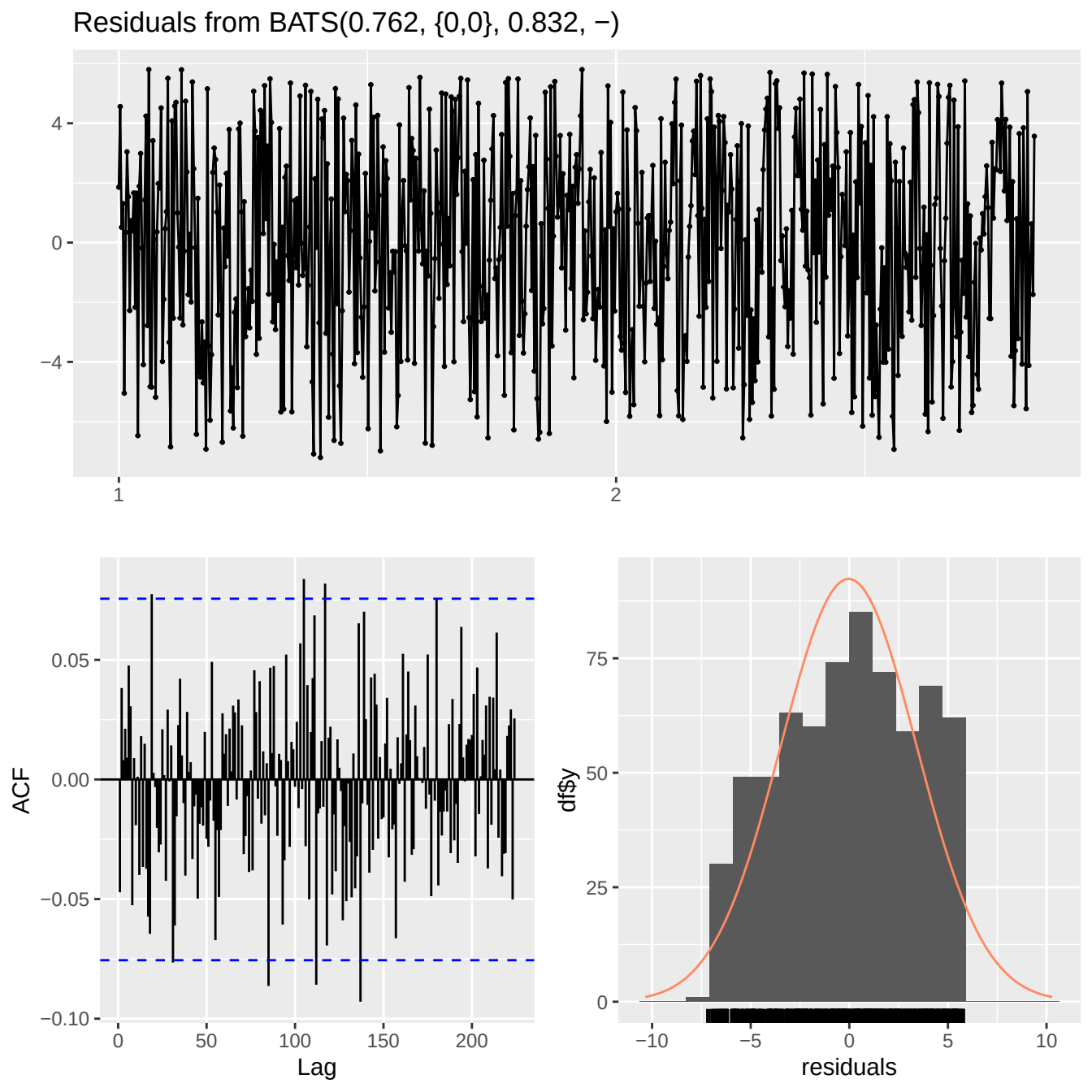

30−Day Temperature Forecast
ts_temp
50
25
0
−25
1.0
1.5
2.0
2.5
3.0
Time

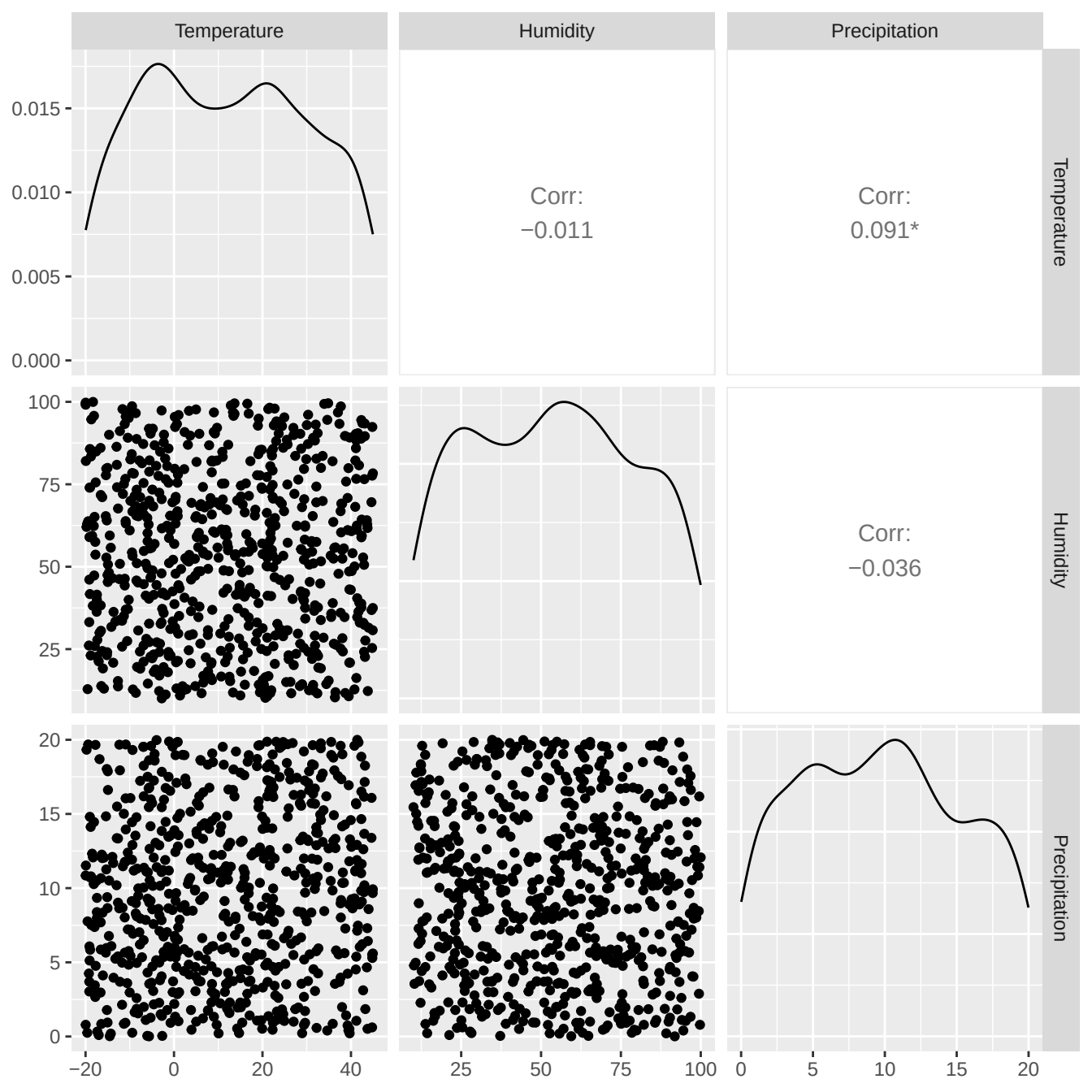

30−Day Humidity Forecast
ts_humidity
100
75
50
25
0
1.0
1.5
2.0
2.5
3.0
Time

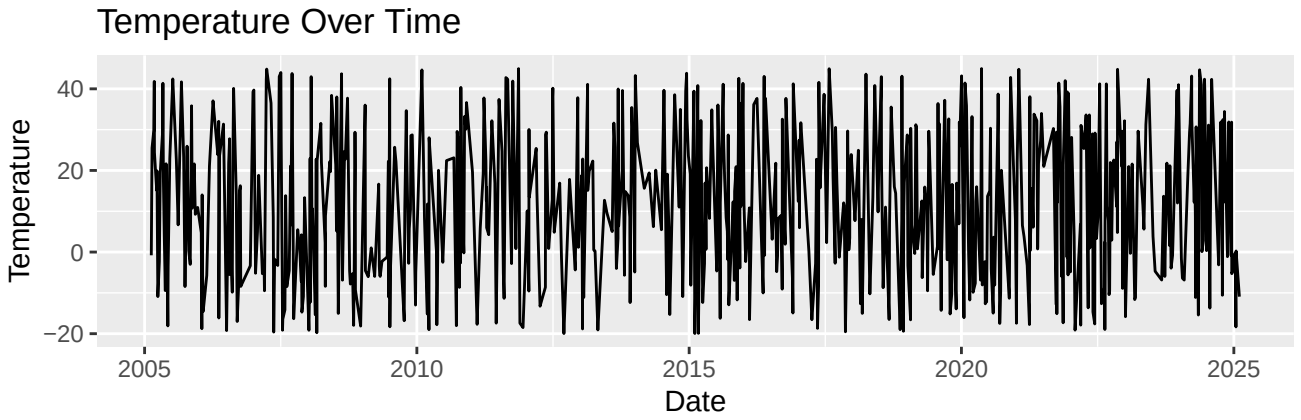

30−Day Precipitation Forecast
ts_precip
20
15
10
5
0
1.0
1.5
2.0
2.5
3.0
Time

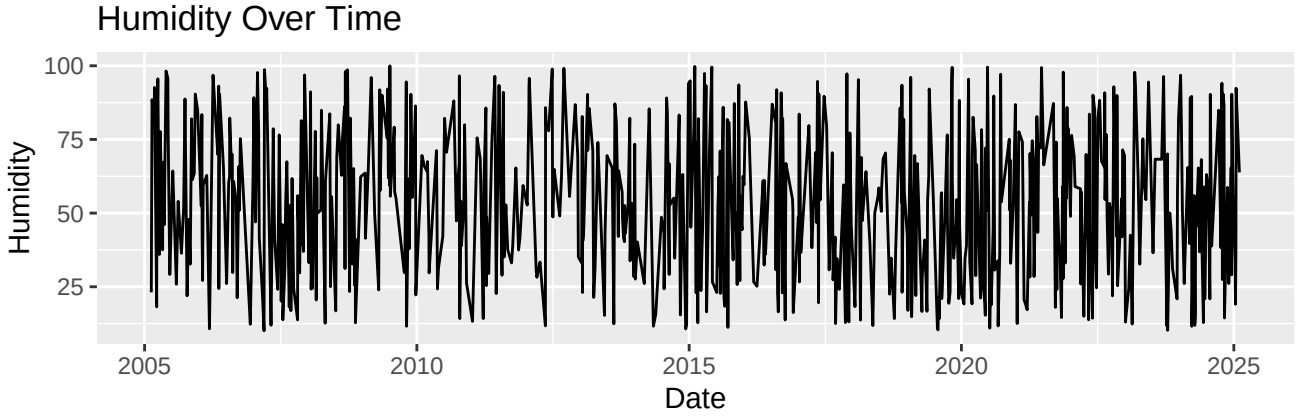

Residuals from ARIMA(0,0,0) with non−zero mean
20
0
−20
1
2
ACF
0.10
0.05
0.00
−0.05
−0.10
0
50
100
150
200
Lag
df$y
75
50
25
0
−60
−30
0
30
60
residuals

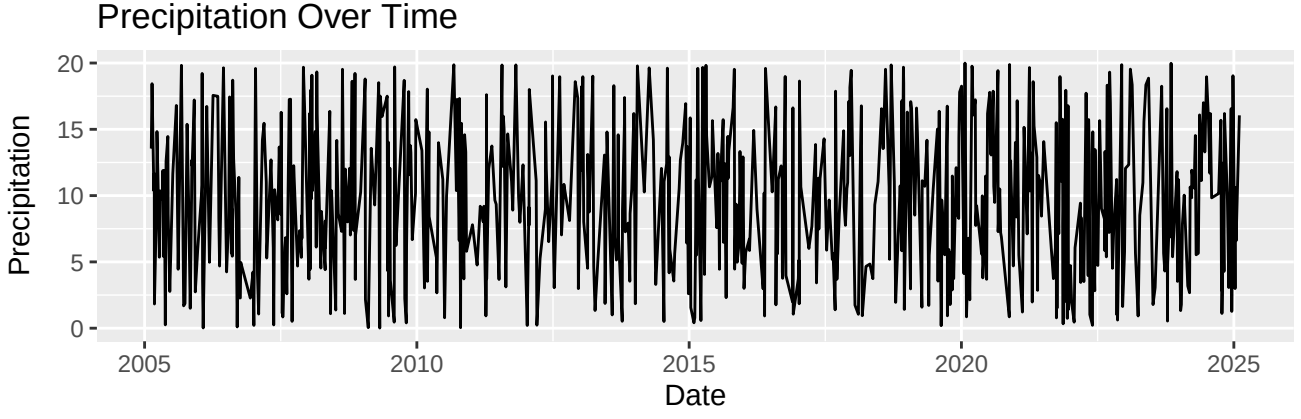

Residuals from ARIMA(2,0,2) with non−zero mean
50
25
0
−25
−50
1
2
0.10
0.05
0.00
−0.05
−0.10
ACF
0
50
100
150
200
Lag
100
75
50
25
0
df$y
−50
0
50
residuals

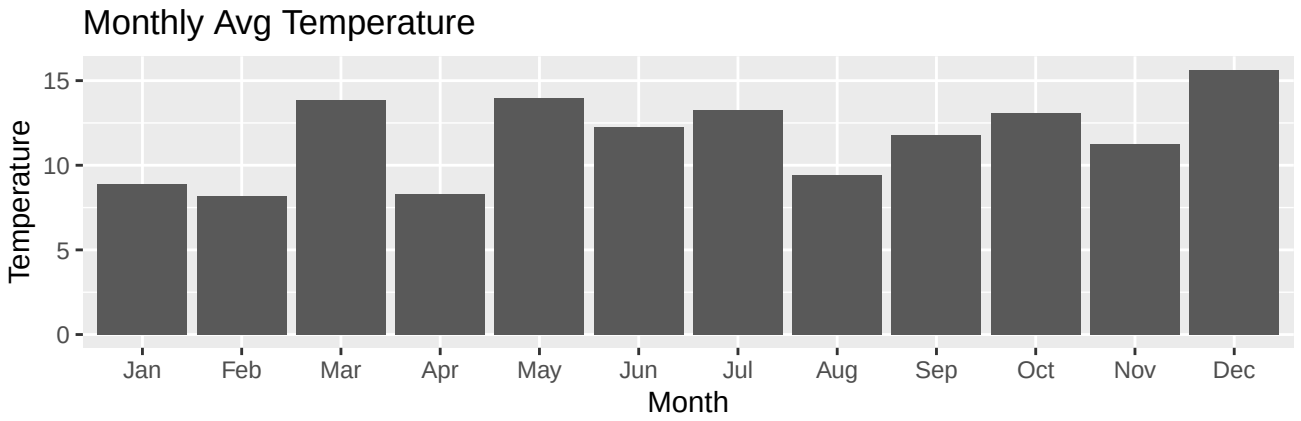

Residuals from BATS(0.762, {0,0}, 0.832, −)
4
0
−4
1
2
0.05
0.00
−0.05
−0.10
ACF
0
50
100
150
200
Lag
75
50
25
0
df$y
−10
−5
0
5
10
residuals

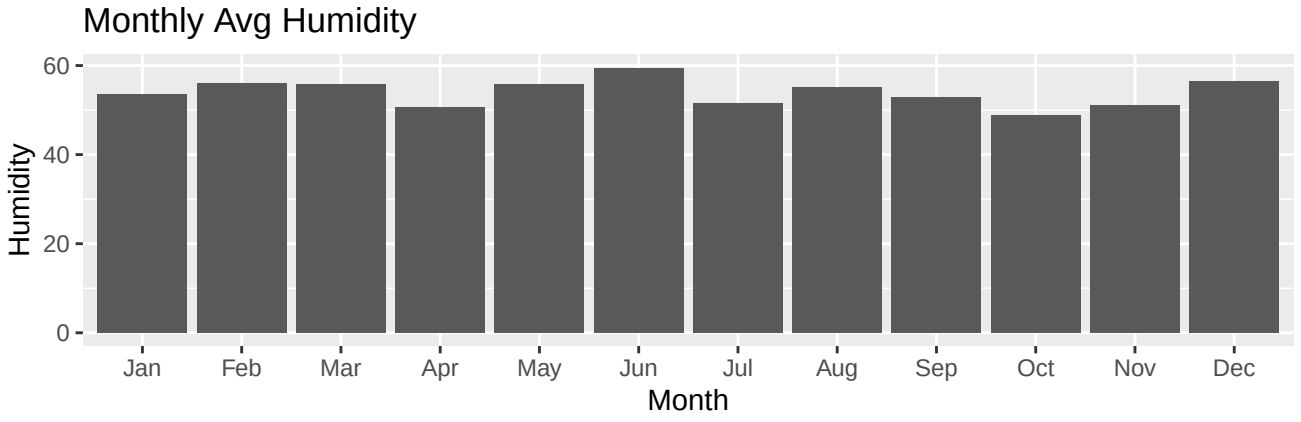

Temperature
Humidity
Precipitation
Temperature
Humidity
Precipitation
Corr:
−0.011
Corr:
0.091*
Corr:
−0.036
0.015
0.010
0.005
0.000
100
75
50
25
20
15
10
5
0
−20
0
20
40
25
50
75
100
0
5
10
15
20

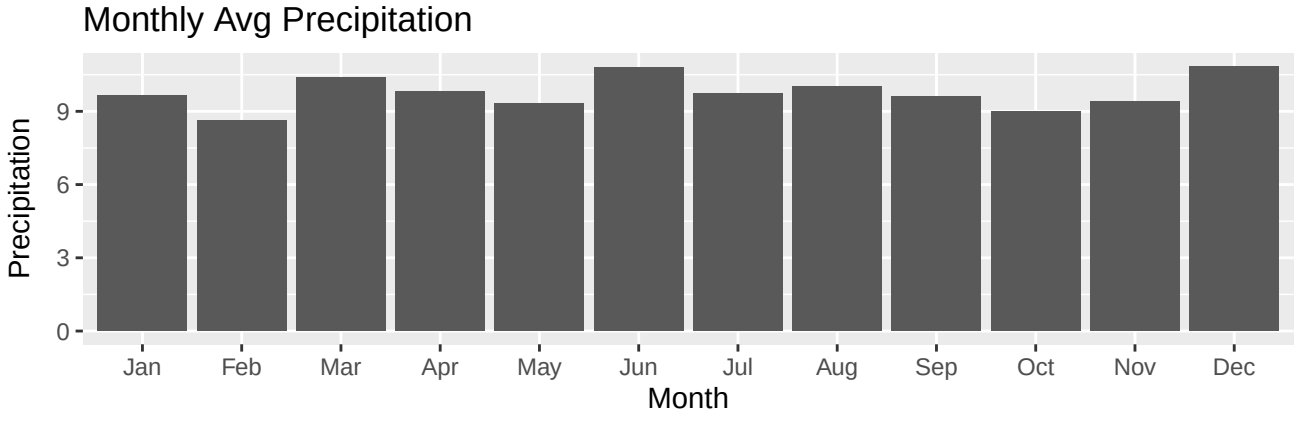

Temperature Over Time
Temperature
40
20
0
−20
2005
2010
2015
2020
2025
Date

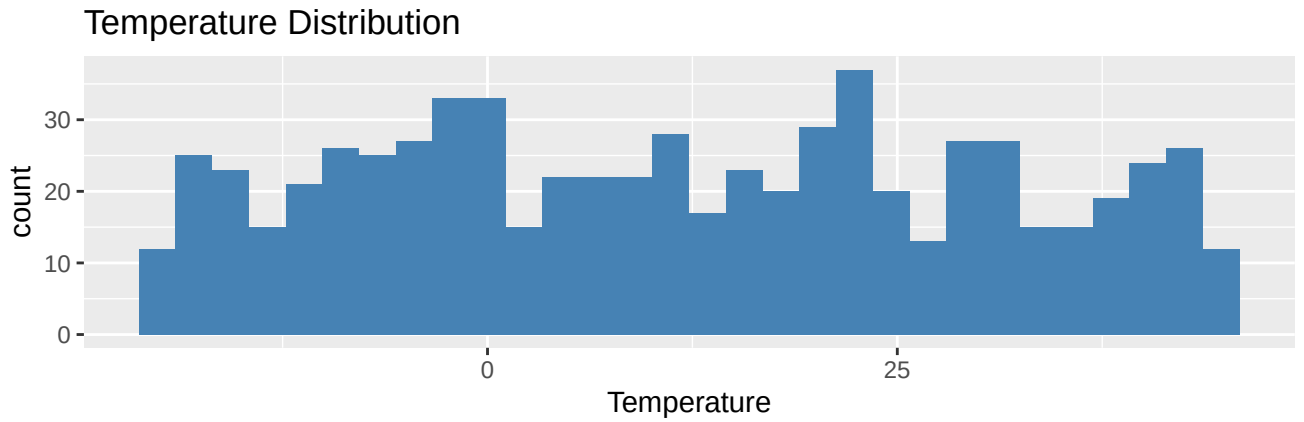

Humidity Over Time
Humidity
100
75
50
25
2005
2010
2015
2020
2025
Date

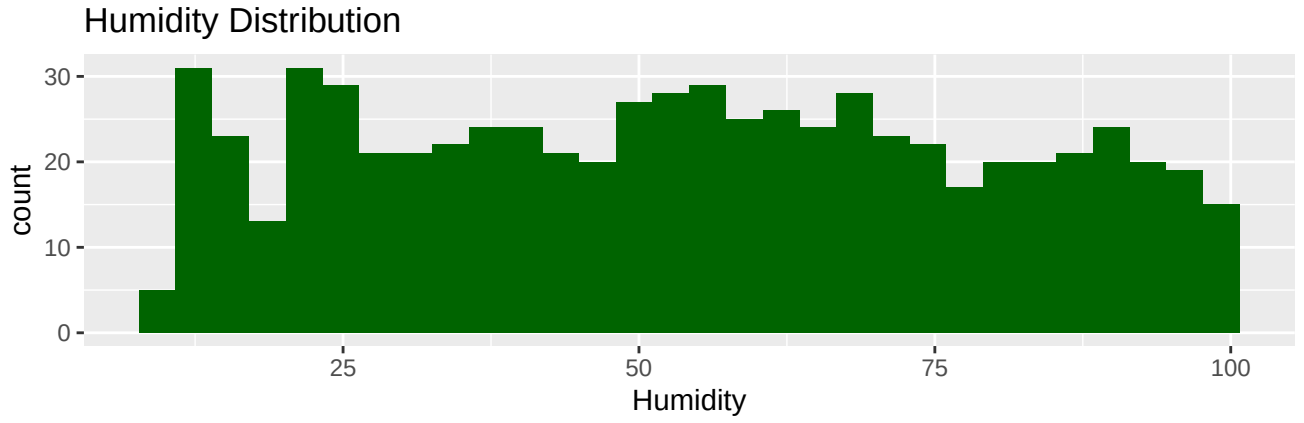

Precipitation Over Time
Precipitation
20
15
10
5
0
2005
2010
2015
2020
2025
Date

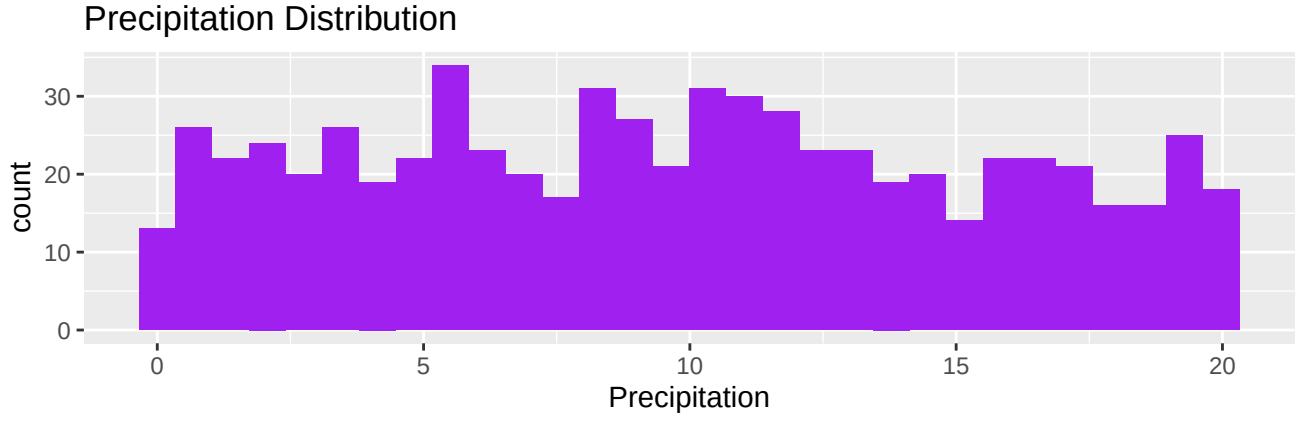

Monthly Avg Temperature
Temperature
15
10
5
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Month

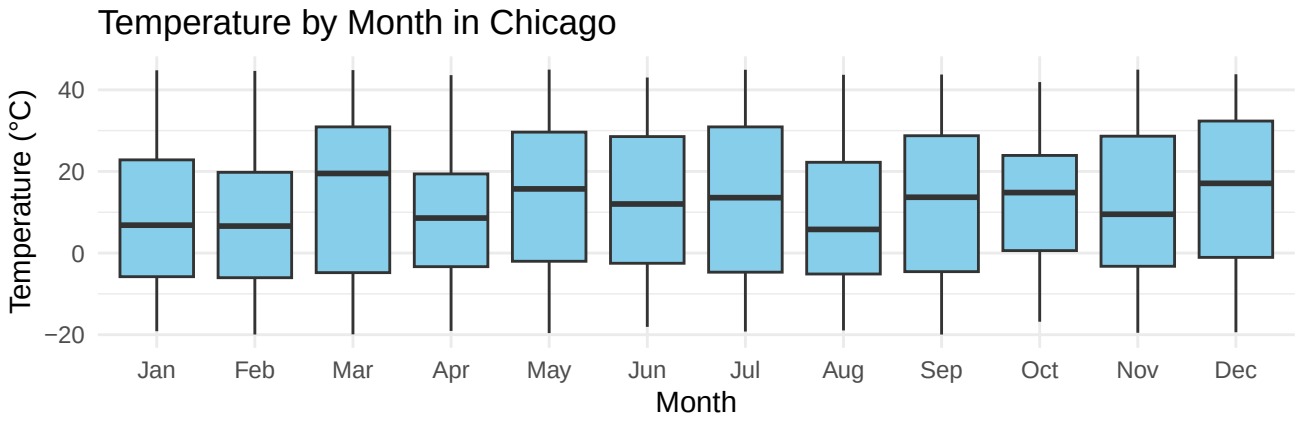

Monthly Avg Humidity
Humidity
60
40
20
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Month

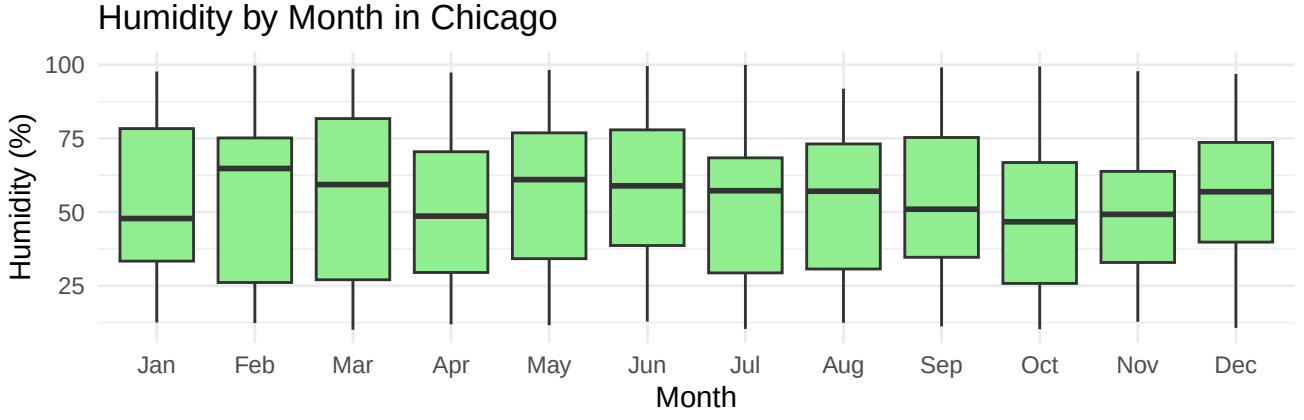

Monthly Avg Precipitation
Precipitation
9
6
3
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Month

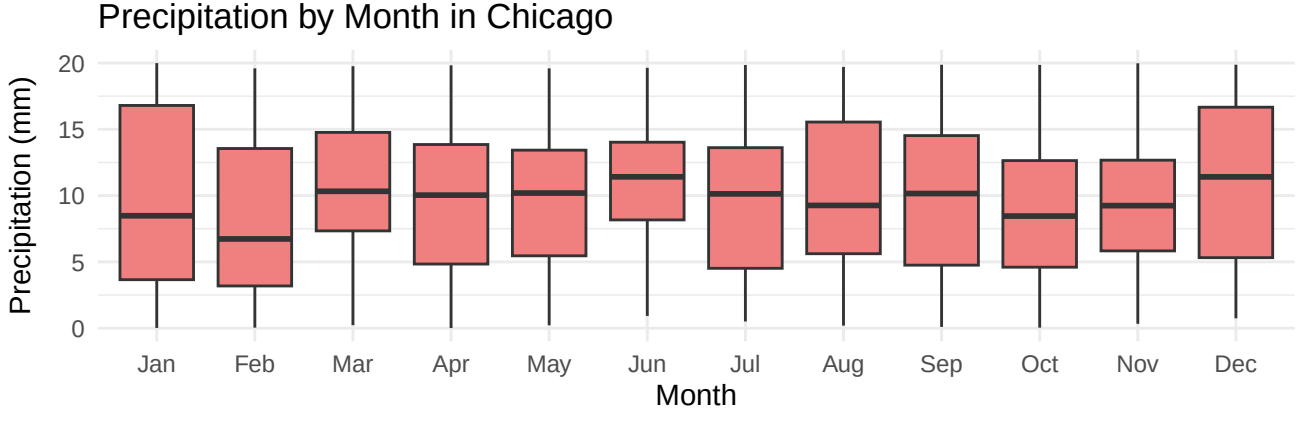

Temperature Distribution
count
30
20
10
0
0
25
Temperature


Humidity Distribution
count
30
20
10
0
25
50
75
100
Humidity


Precipitation Distribution
count
30
20
10
0
0
5
10
15
20
Precipitation


Temperature by Month in Chicago
Temperature (°C)
40
20
0
−20
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Month


Humidity by Month in Chicago
Humidity (%)
100
75
50
25
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Month


Precipitation by Month in Chicago
Precipitation (mm)
20
15
10
5
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Month