
```
% Hi! Welcome to our program! Scroll down to learn about the air
quality of our hometowns in the past month, Seattle, LA, and New
York!

% import data to matlab
load aqui_data.mat
sep_data = aqi_data(1:10,:);
oct_data = aqi_data(11:30,:);

% Specifying our data ranges for September
LA_sep = sep_data(:,1)' ;
NY_sep = sep_data(:,2)' ;
SEA_sep = sep_data(:,3)' ;

% Specifying our data ranges for October
LA_oct = oct_data(:,1)' ;
NY_oct = oct_data(:,2)' ;
SEA_oct = oct_data(:,3)' ;

% For loop takes the air quality values for September in October and
outputs recommendations accordingly.
k = 21;
count1 = 0;
count2 = 0;
count3 = 0;
count4 = 0;
for x = LA_sep
    if x <= 50
        fprintf(1, 'On September %d, the LA air quality is
satisfactory.\n',k)
        count1 = count1 + 1;
    elseif x <= 100
        fprintf(1, 'On September %d, the LA air quality is acceptable.
\n',k)
        count2 = count2 + 1;
    elseif x <= 150
        fprintf(1, 'On September %d, the LA air quality is concerning
for members of sensitive groups.\n',k)
        count3 = count3 + 1;
    else
        fprintf(1, 'On September %d, please stay at home.\n',k)
        count4 = count4 + 1;
    end
    k = k+1;
end

count1
count2
count3
count4
```

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% For loop takes the air quality values for LA in October and outputs
weather warnings as needed.
k = 1;
Count1 = 0;
Count2 = 0;
Count3 = 0;
Count4 = 0;
for x = LA_oct
    if x <= 50
        fprintf(1, 'On October %d, the LA air quality is satisfactory.
\n',k)
        Count1 = Count1 + 1;
    elseif x <= 100
        fprintf(1, 'On October %d, the LA air quality is acceptable.
\n',k)
        Count2 = Count2 + 1;
    elseif x <= 150
        fprintf(1, 'On October %d, the LA air quality is concerning
for members of sensitive groups.\n',k)
        Count3 = Count3 + 1;
    else
        fprintf(1, 'On October %d, please stay at home.\n',k)
        Count4 = Count4 + 1;
    end
    k = k+1;
end

Count1
Count2
Count3
Count4

%
LA = [LA_sep, LA_oct];
m = mean(LA);

year = 0;
air_pollution_index = 10;

while m > air_pollution_index
    decrease_for_a_tree = 0.8^(year + 1);
    m = m * decrease_for_a_tree;
    year = year + 1;
end
year

% Plots graph that depicts air quality index for Los Angeles, New York
and Seattle on the dates of 9/21-9/30.
x = 21:30;
y1 = LA_sep;
y2 = NY_sep;
y3 = SEA_sep;
figure(1)

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plot(x,y1,'k-')
hold on
plot(x,y2,'r-')
hold on
plot(x,y3,'b-')
grid on
legend('LA','NY','SEA')
xlabel('Date')
ylabel('Air Quality Index')
title('Air Quality Index in September')

% Plots graph that depicts air quality index for three major cities on
the dates of 10/1-10/20.
x = 1:20;
y1 = LA_oct;
y2 = NY_oct;
y3 = SEA_oct;
figure(2)
plot(x,y1,'k-')
hold on
plot(x,y2,'r-')
hold on
plot(x,y3,'b-')
grid on
legend('LA','NY','SEA')
xlabel('Date')
ylabel('Air Quality Index')
title('Air Quality Index in October')

On September 21, the LA air quality is satisfactory.
On September 22, the LA air quality is satisfactory.
On September 23, the LA air quality is acceptable.
On September 24, the LA air quality is acceptable.
On September 25, the LA air quality is acceptable.
On September 26, the LA air quality is acceptable.
On September 27, the LA air quality is acceptable.
On September 28, the LA air quality is acceptable.
On September 29, the LA air quality is acceptable.
On September 30, the LA air quality is satisfactory.

count1 =

    3

count2 =

    7

count3 =

    0

```

count4 =

0

On October 1, the LA air quality is satisfactory.
On October 2, the LA air quality is satisfactory.
On October 3, the LA air quality is acceptable.
On October 4, the LA air quality is satisfactory.
On October 5, the LA air quality is acceptable.
On October 6, the LA air quality is acceptable.
On October 7, the LA air quality is satisfactory.
On October 8, the LA air quality is satisfactory.
On October 9, the LA air quality is satisfactory.
On October 10, the LA air quality is acceptable.
On October 11, the LA air quality is acceptable.
On October 12, the LA air quality is satisfactory.
On October 13, the LA air quality is acceptable.
On October 14, the LA air quality is satisfactory.
On October 15, the LA air quality is satisfactory.
On October 16, the LA air quality is satisfactory.
On October 17, the LA air quality is satisfactory.
On October 18, the LA air quality is satisfactory.
On October 19, the LA air quality is satisfactory.
On October 20, the LA air quality is satisfactory.

Count1 =

14

Count2 =

6

Count3 =

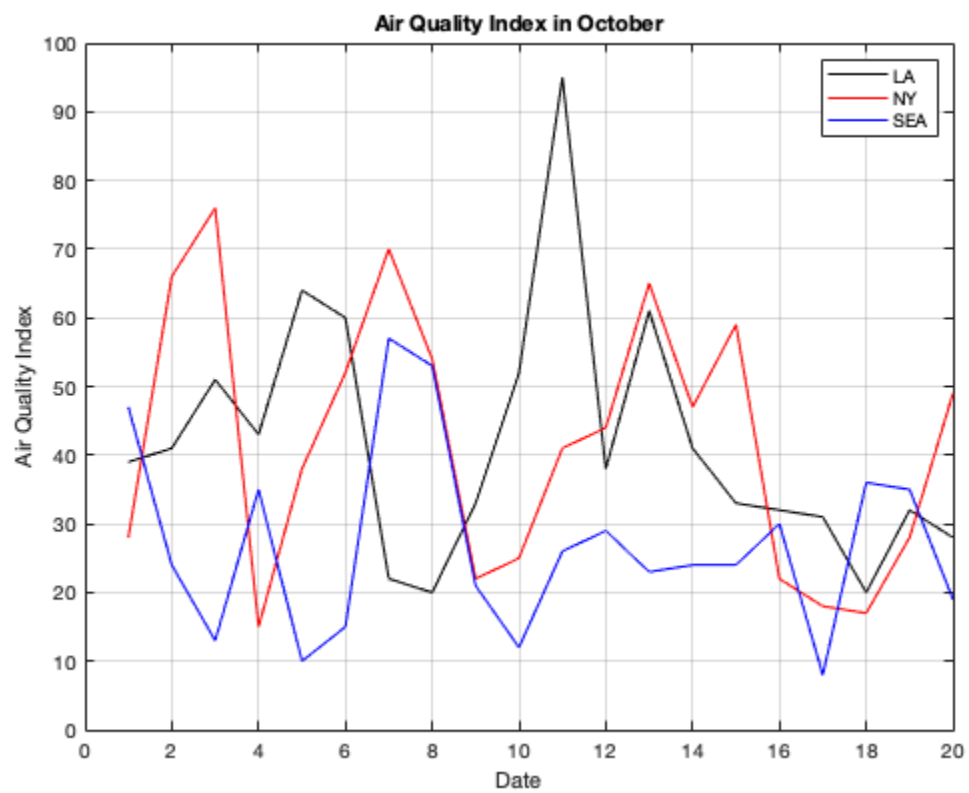
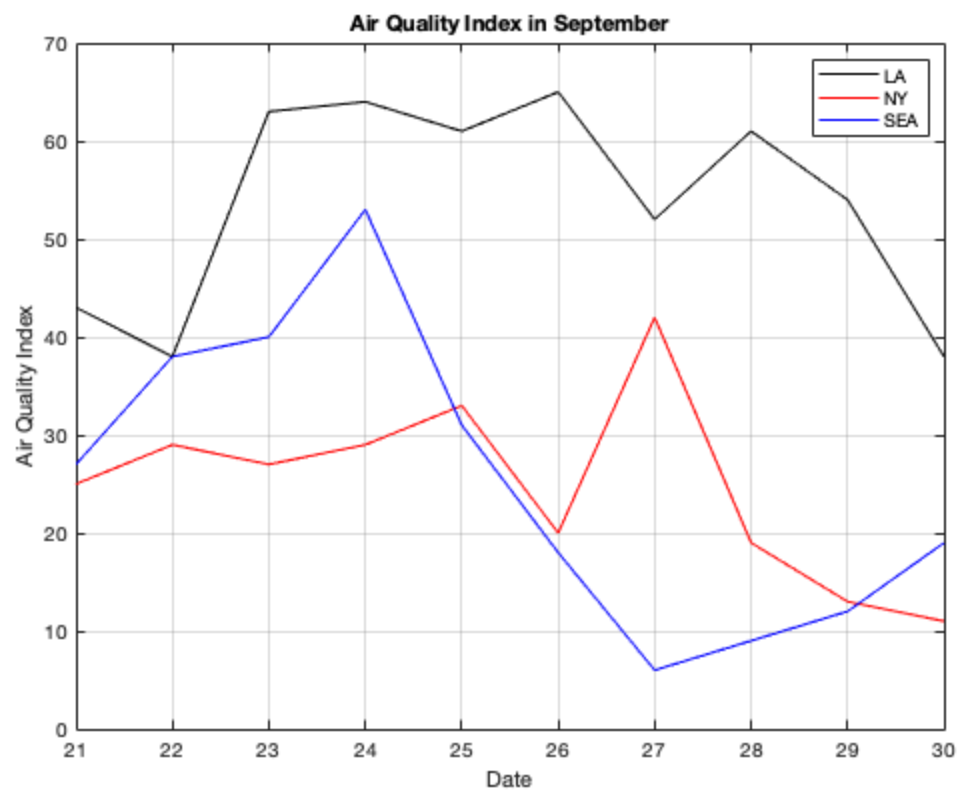
0

Count4 =

0

year =

4



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