

Impact of Weather on Ridership of the Chicago Transit Authority

Summary Statistics

```
ods noproctitle;
ods graphics / imagemap=on;

proc means data=WORK.IMPORT chartype mean min max n nmiss vardef=df;
  var Ridership_Total_All Ridership_Total_Bus Ridership_Total_Rail
      Precipitation_Inches Snowfall_Inches;
run;
```

Histogram for Ridership Total Bus Variable

```
ods graphics / reset width=6.4in height=4.8in imagemap;

proc sgplot data=WORK.IMPORT;
  histogram Ridership_Total_Bus /;
  density Ridership_Total_Bus;
  yaxis grid;
  keylegend "DENSITY" / location=inside position=topright across=1;
run;

ods graphics / reset;
```

Histogram for Ridership Total Rail Variable

```
ods graphics / reset width=6.4in height=4.8in imagemap;

proc sgplot data=WORK.IMPORT;
  histogram Ridership_Total_Rail /;
  density Ridership_Total_Rail;
  yaxis grid;
run;

ods graphics / reset;
```

Histogram for Precipitation Inches Variable

```
ods graphics / reset width=6.4in height=4.8in imagemap;

proc sgplot data=WORK.IMPORT;
  histogram Precipitation_Inches /;
  density Precipitation_Inches;
  xaxis min=0;
  yaxis grid;
run;

ods graphics / reset;
```

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Histogram for Snowfall Inches Variable

```
ods graphics / reset width=6.4in height=4.8in imagemap;

proc sgplot data=WORK.IMPORT;
  histogram Snowfall_Inches /;
  density Snowfall_Inches;
  xaxis min=0;
  yaxis grid;
run;

ods graphics / reset;
```

RQ1: Scatter Plot of Correlation between Precipitation Inches and Ridership Total All

```
ods noproctitle;
ods graphics / imagemap=on;

proc corr data=WORK.IMPORT pearson nosimple
  plots(maxpoints=none)=scatter(ellipse=none nvar=2 nwith=2);
  var Precipitation_Inches;
  with Ridership_Total_All;
run;
```

RQ2: Scatter Plot of Correlation between Precipitation Inches and Ridership Total Bus

```
ods noproctitle;
ods graphics / imagemap=on;

proc corr data=WORK.IMPORT pearson nosimple
  plots(maxpoints=none)=scatter(ellipse=none nvar=2 nwith=2);
  var Precipitation_Inches;
  with Ridership_Total_Bus;
run;
```

RQ3: Scatter Plot of Correlation between Precipitation Inches and Ridership Total Rail

```
ods noproctitle;
ods graphics / imagemap=on;

proc corr data=WORK.IMPORT pearson nosimple
  plots(maxpoints=none)=scatter(ellipse=none nvar=2 nwith=2);
  var Precipitation_Inches;
  with Ridership_Total_Rail;
run;
```

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RQ4: Scatter Plot of Correlation between Snowfall Inches and Ridership Total All

```
ods noproctitle;
ods graphics / imagemap=on;

proc corr data=WORK.IMPORT pearson nosimple
    plots(maxpoints=none)=scatter(ellipse=none nvar=2 nwith=2);
    var Snowfall_Inches;
    with Ridership_Total_All;
run;
```

RQ5: Scatter Plot of Correlation between Snowfall Inches and Ridership Total Bus

```
ods noproctitle;
ods graphics / imagemap=on;

proc corr data=WORK.IMPORT pearson nosimple
    plots(maxpoints=none)=scatter(ellipse=none nvar=2 nwith=2);
    var Snowfall_Inches;
    with Ridership_Total_Bus;
run;
```

RQ6: Scatter Plot of Correlation between Snowfall Inches and Ridership Total Rail

```
ods noproctitle;
ods graphics / imagemap=on;

proc corr data=WORK.IMPORT pearson nosimple
    plots(maxpoints=none)=scatter(ellipse=none nvar=2 nwith=2);
    var Snowfall_Inches;
    with Ridership_Total_Rail;
run;
```

end of code