

STAT 4911 Practice Project

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EDA

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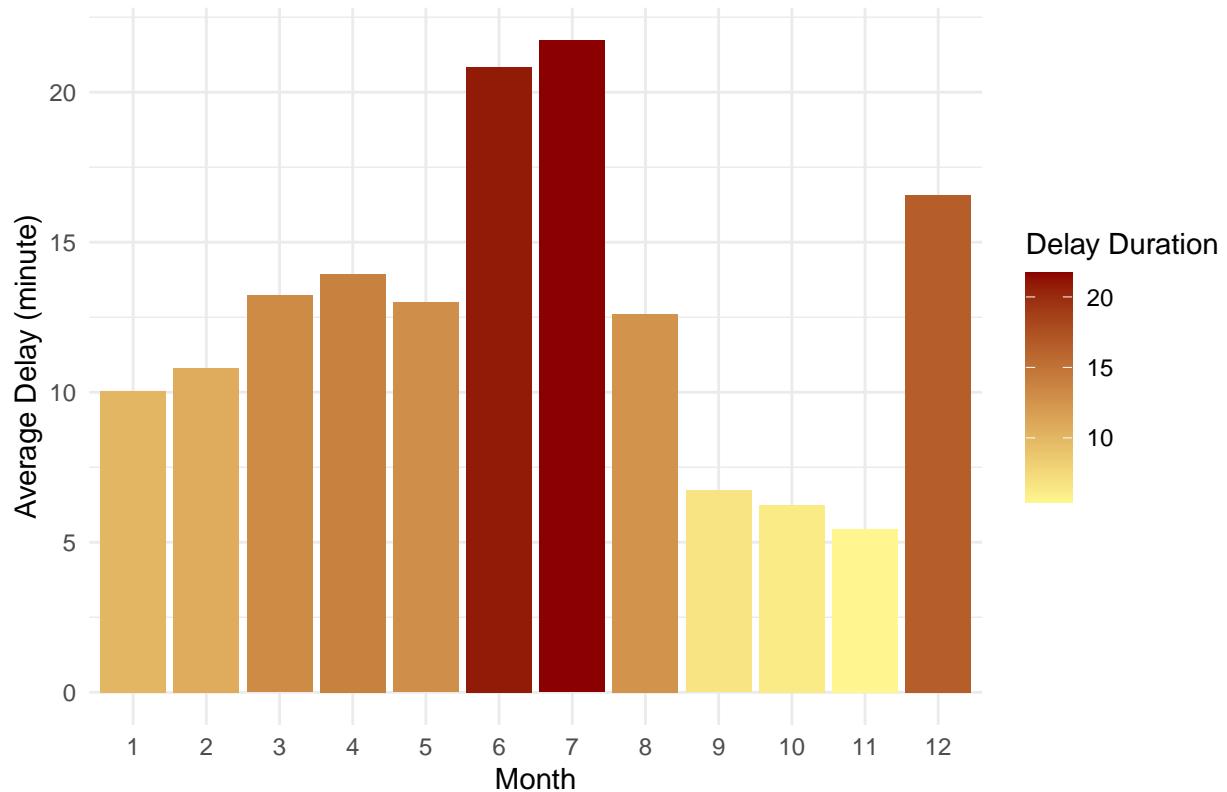
## Rows: 3,322
## Columns: 9
## $ tailnum      <chr> "N10156", "N102UW", "N103US", "N104UW", "N10575", "N105UW~
## $ year        <int> 2004, 1998, 1999, 1999, 2002, 1999, 1999, 1999, 1999, 199~
## $ type         <chr> "Fixed wing multi engine", "Fixed wing multi engine", "Fi~
## $ manufacturer <chr> "EMBRAER", "AIRBUS INDUSTRIE", "AIRBUS INDUSTRIE", "AIRBU~
## $ model        <chr> "EMB-145XR", "A320-214", "A320-214", "A320-214", "EMB-145~
## $ engines       <int> 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, ~
## $ seats         <int> 55, 182, 182, 182, 55, 182, 182, 182, 182, 182, 55, 55, 5~
## $ speed         <int> NA, N~
## $ engine        <chr> "Turbo-fan", "Turbo-fan", "Turbo-fan", "Turbo-fan", "Turb~

## Rows: 26,115
## Columns: 15
## $ origin        <chr> "EWR", "EWR", "EWR", "EWR", "EWR", "EWR", "EWR", "EWR", "EWR~
## $ year          <int> 2013, 2013, 2013, 2013, 2013, 2013, 2013, 2013, 2013, ~
## $ month         <int> 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, ~
## $ day            <int> 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, ~
## $ hour           <int> 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 13, 14, 15, 16, 17, 18, ~
## $ temp           <dbl> 39.02, 39.02, 39.02, 39.92, 39.02, 37.94, 39.02, 39.92, 39.~
## $ dewp           <dbl> 26.06, 26.96, 28.04, 28.04, 28.04, 28.04, 28.04, 28.04, 28.~
## $ humid          <dbl> 59.37, 61.63, 64.43, 62.21, 64.43, 67.21, 64.43, 62.21, 62.~
## $ wind_dir        <dbl> 270, 250, 240, 250, 260, 240, 240, 250, 260, 260, 330, ~
## $ wind_speed      <dbl> 10.35702, 8.05546, 11.50780, 12.65858, 12.65858, 11.50780, ~
## $ wind_gust        <dbl> NA, ~
## $ precip          <dbl> 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, ~
## $ pressure         <dbl> 1012.0, 1012.3, 1012.5, 1012.2, 1011.9, 1012.4, 1012.2, 101~
## $ visib           <dbl> 10, 10, 10, 10, 10, 10, 10, 10, 10, 10, 10, 10, 10, 10, 10, ~
## $ time_hour        <dttm> 2013-01-01 01:00:00, 2013-01-01 02:00:00, 2013-01-01 03:00~
```

Data cleaning: Process canceled flights and calculate average delays for each month.

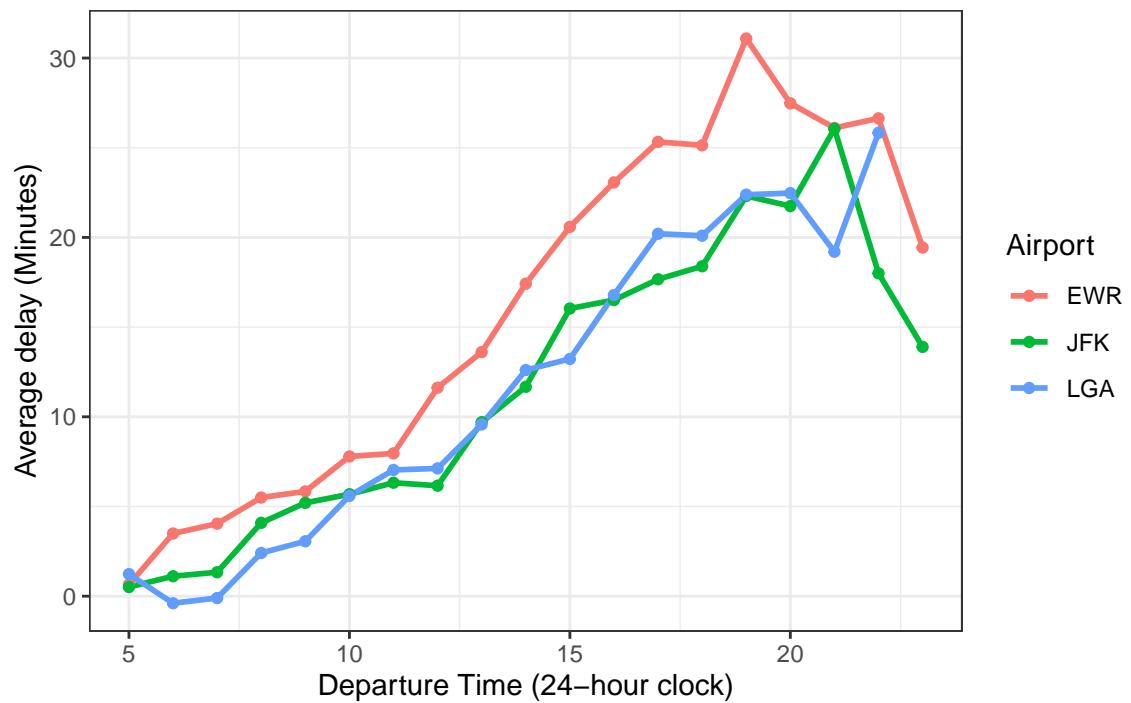
Monthly Delay Trend Chart

Average monthly flight delays at New York airports in 2013



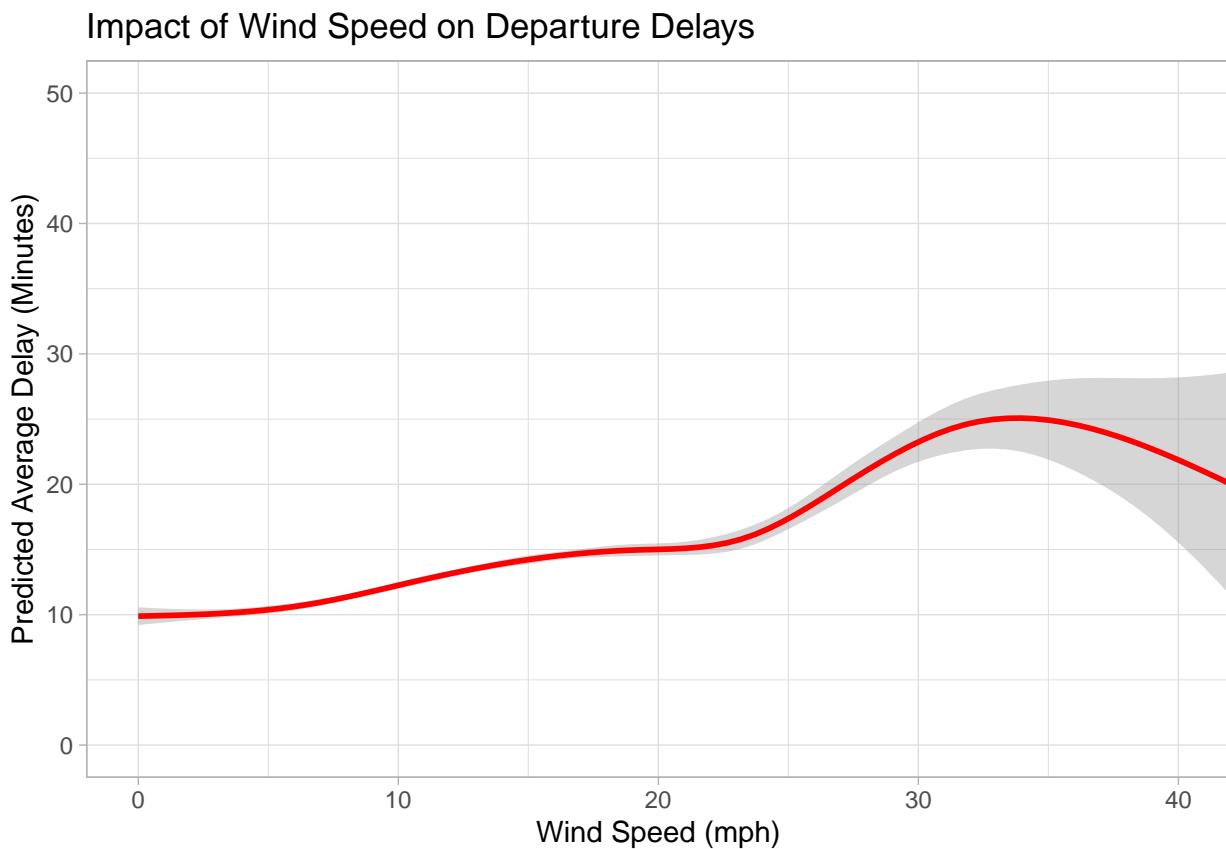
Airport Comparison

Average Hourly Delay Trends



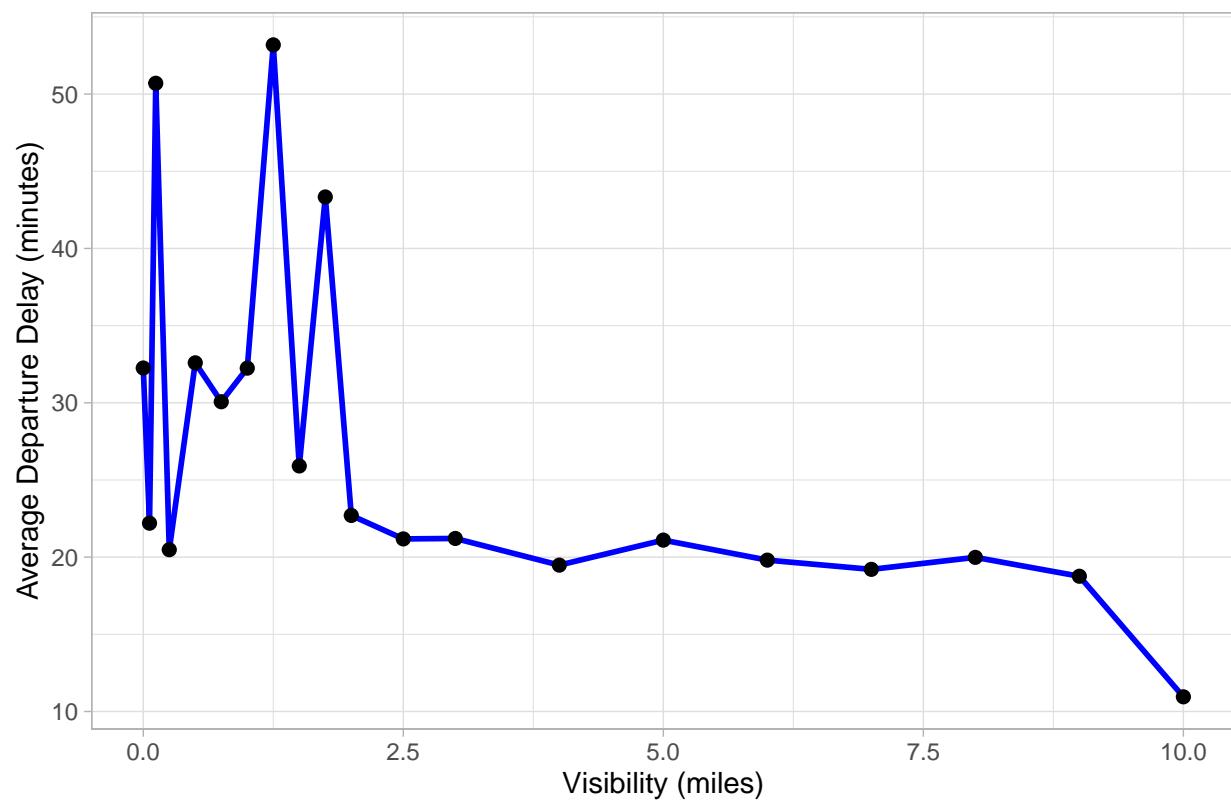
Weather factors

Wind



Visibility

Impact of Visibility on Average Departure Delay



Humidity

Average Delay by Humidity Levels

Binned by 5% increments

