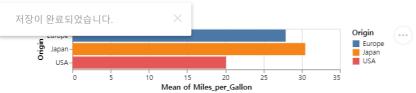
```
# Visualization: Histogram in Altair
# load an example dataset
from vega_datasets import data
cars = data.cars()
# plot the dataset, referencing dataframe column names
import altair as alt
alt.Chart(cars).mark_bar().encode(
  x=alt.X('Miles_per_Gallon', bin=True),
  y='count()',
         100
         90
         80
         70
       Count of Records
         60
         50-
         40
          30
         20
          10
                                                    35
                                                           40
                                                                 45
                                         iallon (binned)
  저장이 완료되었습니다.
# Visualization: Linked Brushing in Altair
# load an example dataset
from vega_datasets import data
cars = data.cars()
import altair as alt
interval = alt.selection_interval()
base = alt.Chart(cars).mark_point().encode(
  y='Miles_per_Gallon'
  color=alt.condition(interval, 'Origin', alt.value('lightgray'))
).properties(
  selection=interval
base.encode(x='Acceleration') | base.encode(x='Horsepower')
         45
                                                                              45
         40
                                                                              40
         35
                                                                              35
       Wiles ber Gallon
                                                                            30-
25-
                                                                            <u>8</u> 20
                                                            8
         15
                                                                              15
         10
                                                                              10
                                                     18
                                                                                                              120
                                                                                                                   140
                                     Acceleration
                                                                                                          Horsepo
# Visualization: Stacked Histogram in Altair
# load an example dataset
from vega_datasets import data
cars = data.cars()
# plot the dataset, referencing dataframe column names
import altair as alt
alt.Chart(cars).mark_bar().encode(
  x=alt.X('Miles_per_Gallon', bin=True),
  y='count()',
  color='Origin'
```

```
100
                                                                                                            Origin
                                                                                                            Europe
Japan
USA
             90-
             80-
             70
         Count of Records
             60
             50-
             40
             30
             20
              10-
               0-
                                             20 25 30 35
Miles_per_Gallon (binned)
# Visualization: Bar Plot in Altair
```

load an example dataset

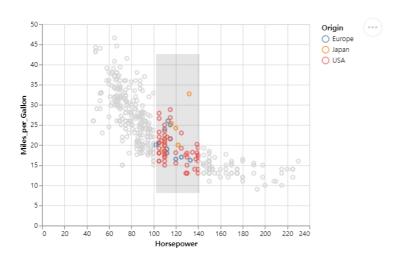
```
from vega_datasets import data
cars = data.cars()
# plot the dataset, referencing dataframe column names
import altair as alt
```

```
alt.Chart(cars).mark_bar().encode(
 x='mean(Miles_per_Gallon)',
 y='Origin',
 color='Origin'
```



Visualization: Interactive Brushing in Altair

```
# load an example dataset
from vega_datasets import data
cars = data.cars()
import altair as alt
interval = alt.selection_interval()
alt.Chart(cars).mark_point().encode(
 x='Horsepower',
  y='Miles_per_Gallon',
 color=alt.condition(interval, 'Origin', alt.value('lightgray'))
).properties(
 selection=interval
```



Visualization: Interactive Scatter Plot in Altair

```
# load an example dataset
from vega_datasets import data
cars = data.cars()
```

```
# plot the dataset, referencing dataframe column names
import altair as alt
alt.Chart(cars).mark_point().encode(
 x='Horsepower'
```

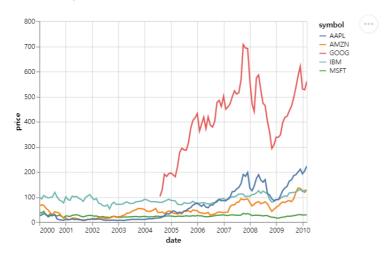
```
).interactive()
                                                                                                         Origin
            50-
                                                                                                         O Europe
O Japan
O USA
            45
            40
         Miles_per_Gallon
            20
            15
            10
               -20
                                     40
                                            60
                                                                               160
                                                                                      180
                                                    Horsepower
```

Visualization: Time Series Line Plot in Altair
from vega_datasets import data
stocks = data.stocks()
import altair as alt
alt.Chart(stocks).mark_line().encode(

저장이 완료되었습니다.

y='Miles_per_Gallon', color='Origin'

).interactive(bind_y=False)



```
# load an example dataset
from vega_datasets import data
cars = data.cars()
import altair as alt
points = alt.Chart(cars).mark_point().encode(
 x='Year:T',
  y='Miles_per_Gallon',
  color='Origin'
).properties(
 width=800
lines = alt.Chart(cars).mark_line().encode(
  x='Year:T',
  y='mean(Miles_per_Gallon)',
  color='Origin'
).properties(
 width=800
).interactive(bind_y=False)
```

points + lines

Visualization: Scatter Plot with Rolling Mean in Altair

```
100 to 10
```

Visualization: Linked Scatter-Plot and Histogram in Altair

```
# load an example dataset
from vega_datasets import data
cars = data.cars()
import altair as alt
interval = alt.selection_interval()
points = alt.Chart(cars).mark_point().encode(
  x='Horsepower',
  y='Miles_per_Gallon',
  color=alt.condition(interval, 'Origin', alt.value('lightgray'))
).properties(
  selection=interval
                                      encode(
  저장이 완료되었습니다.
  y= urigin ,
  color='Origin'
).transform_filter(interval)
```

points & histogram

