Data preparation

ANALYZING DATA IN TABLEAU

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Data preparation

Ask yourself...

- Do any fields need to be refined?
- Are there calculated fields we can create to more effectively tell our data story?
- Does the data contain fields that will allow for summaries or grouping at a higher level?
- Are there sufficient categorical fields to **slice and dice** your data?

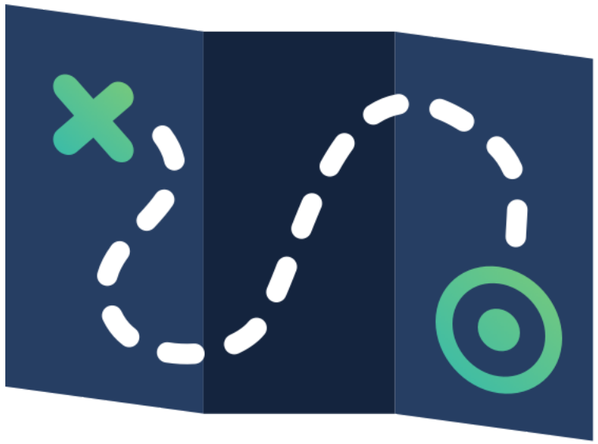
[1] Photo credit: Arvell Dorsey Jr. from Chicago, IL, United States

Divvy dataset: stations table

- `id` : ID attached to each station
- `name` : station name
- `latitude` : station latitude
- `longitude` : station longitude
- `docks` : number of docks at the station

Divvy dataset: trips table

- *Trips taken between Jan - June, 2019*
- `trip id` : ID attached to each trip
- `bikeid` : ID attached to each bike
- `tripduration` : time of trip in seconds
- `starttime` : day and time trip started (CST)
- `endtime` :day and time trip ended (CST)
- `from station id` : station ID of trip start
- `from_station_name` : station name of start
- `to station id` : station ID of trip end



- `to station name` : station name of end
- `usertype` : *customer* or *subscriber*
- `birthyear` : birth year of rider
- `gender` : gender of rider

Dimension and measure recap

Dimensions:

- Categorical or qualitative data

Measures:

- Numerical data that can be aggregated

We want to move fields strategically between these two types:

- Move numeric fields that shouldn't be aggregated to the Dimensions section

Let's practice!

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Preparing the data

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Calculated Fields to extend data

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Visualizations for exploratory analysis of trends

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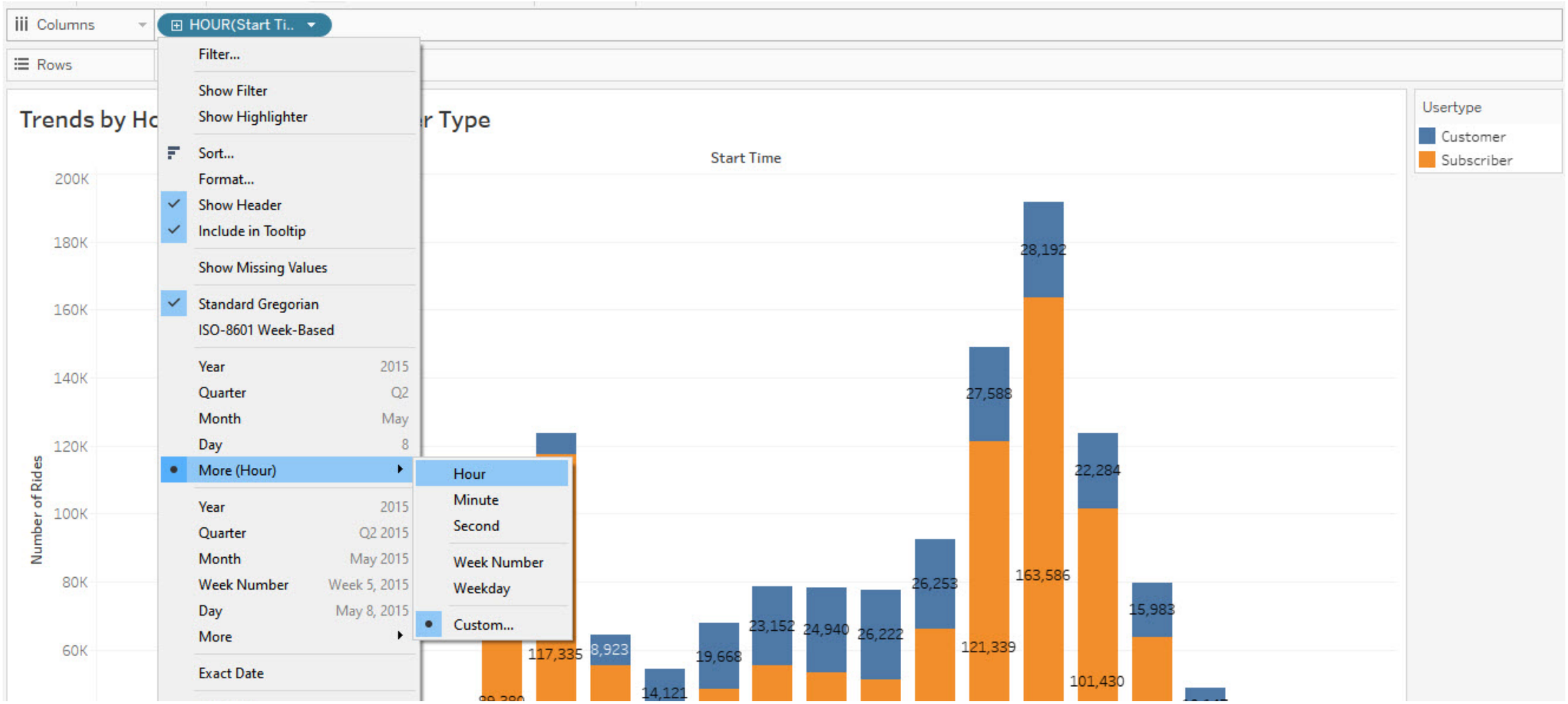
Looking for trends

- Marketing opportunities
- Scheduling maintenance
- Managing size and scheduling of staff
- Increasing or decreasing product stock or availability
- Hourly, daily monthly, annual

Configuring data on Tableau



Discrete or continuous time analysis?

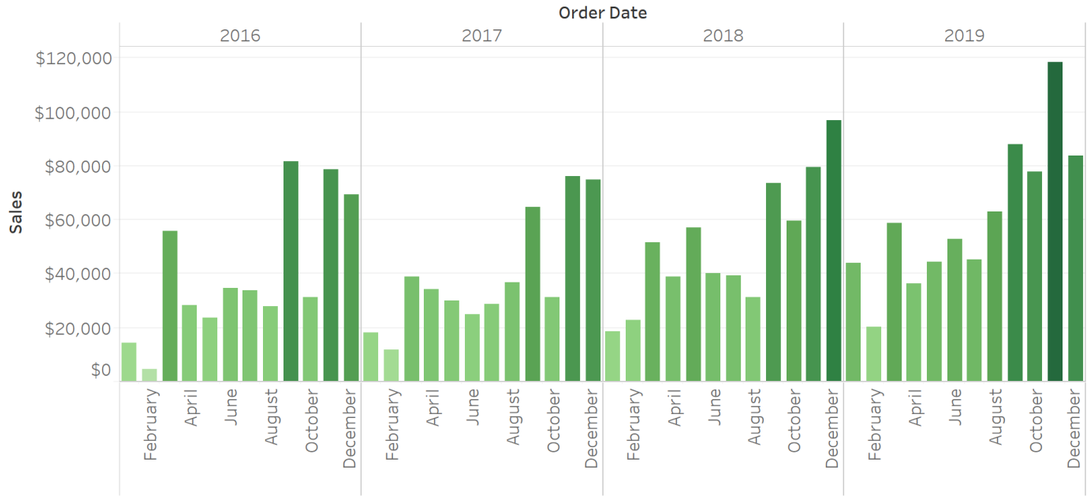
Discrete (bins):

- Trends by hour, day of the week, month, etc

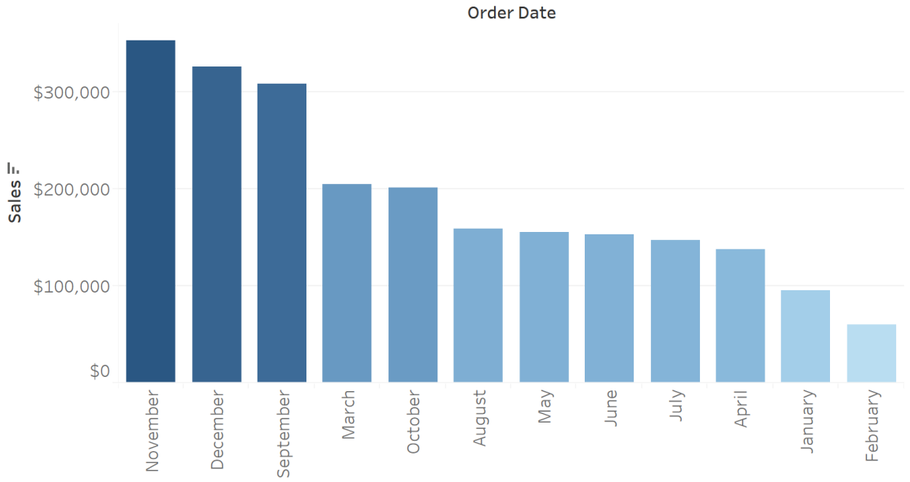
Continuous (time series):

- Presenting data over time in the sequence it historically occurred

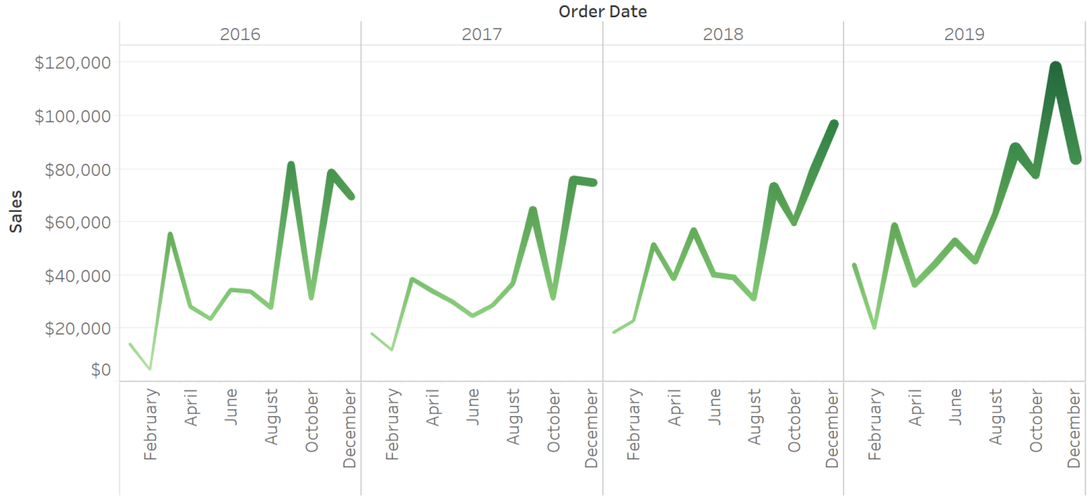
Trends Over Time (Barchart)



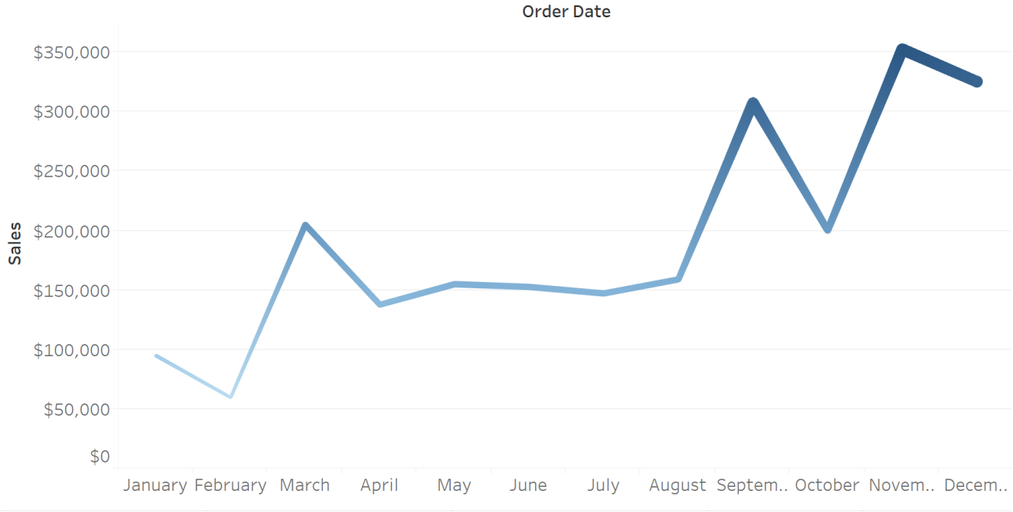
Monthly Pattern of Sales Trends



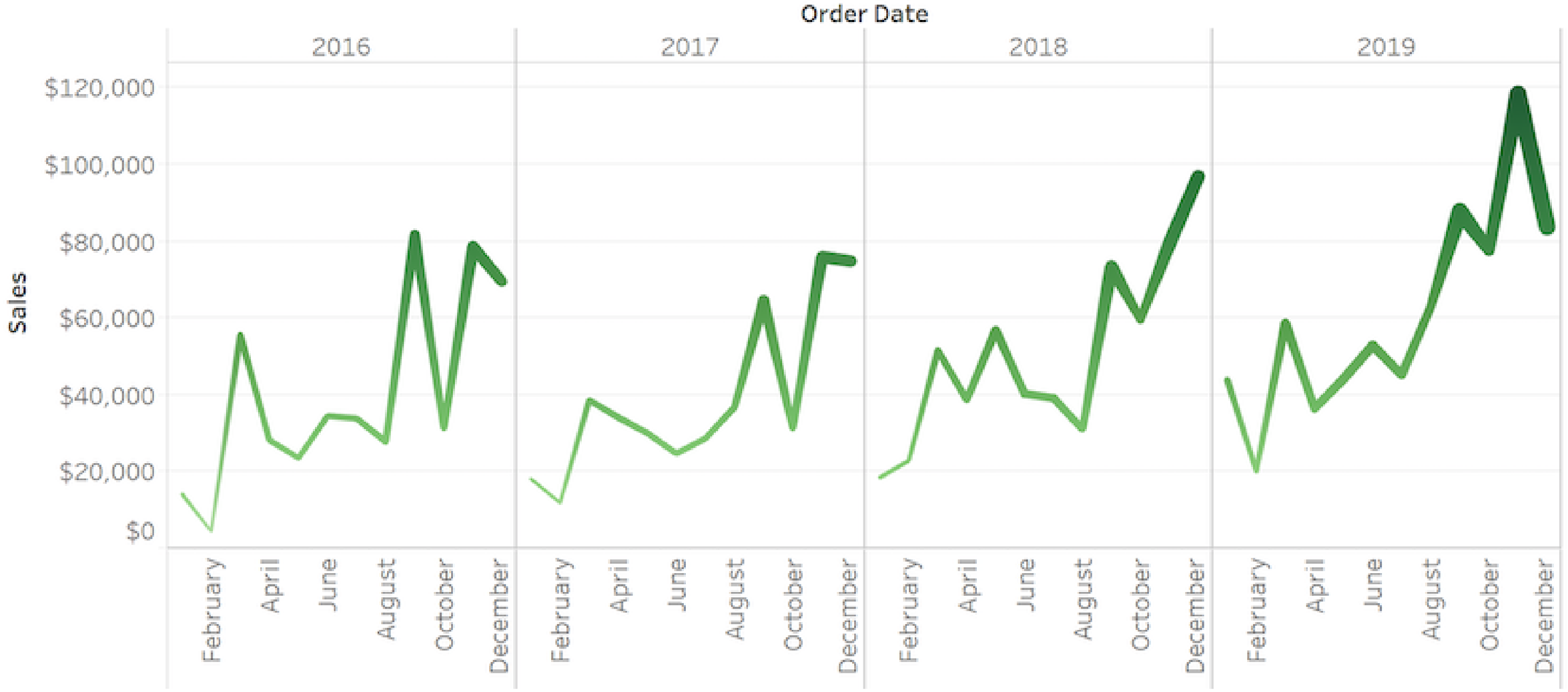
Trends Over Time (Line Chart)



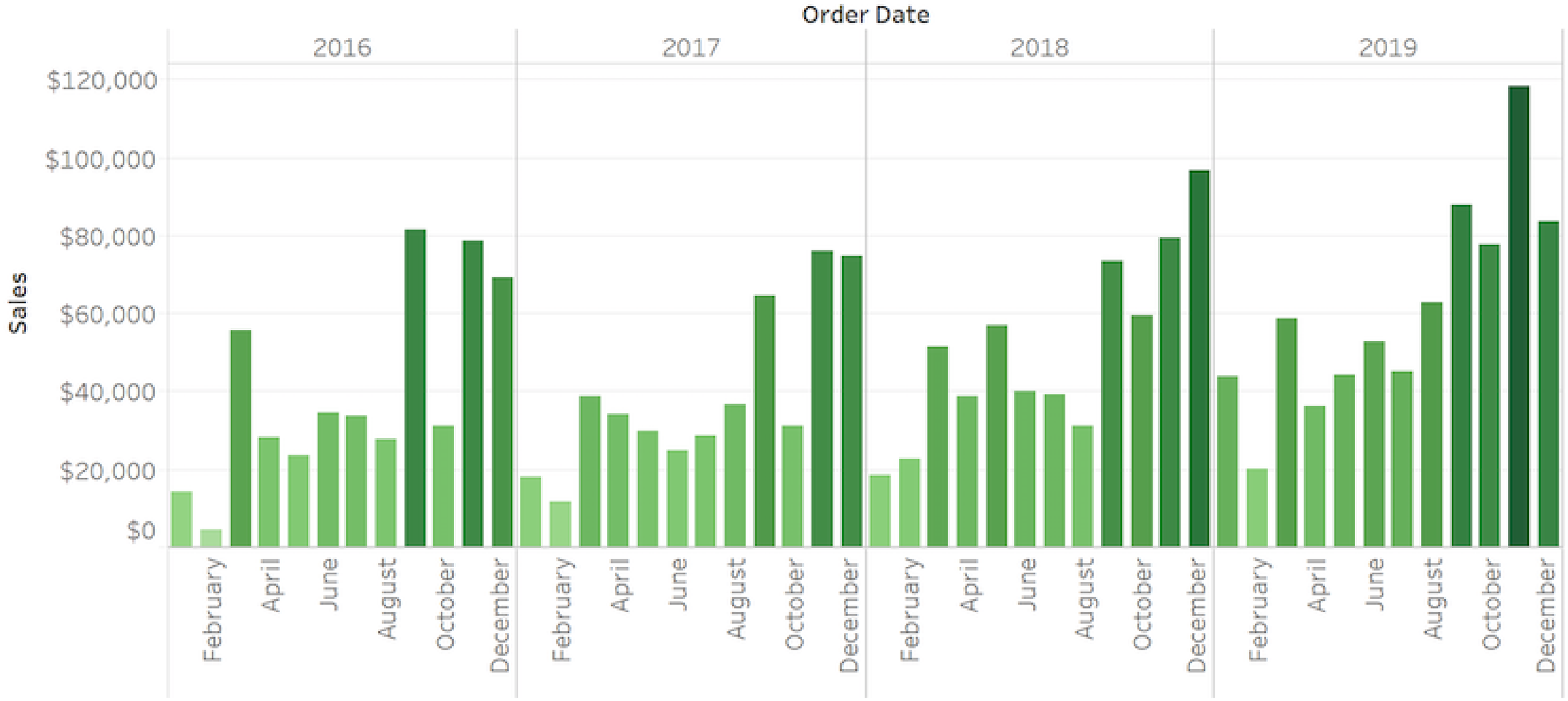
Monthly Trendline of Sales Trends



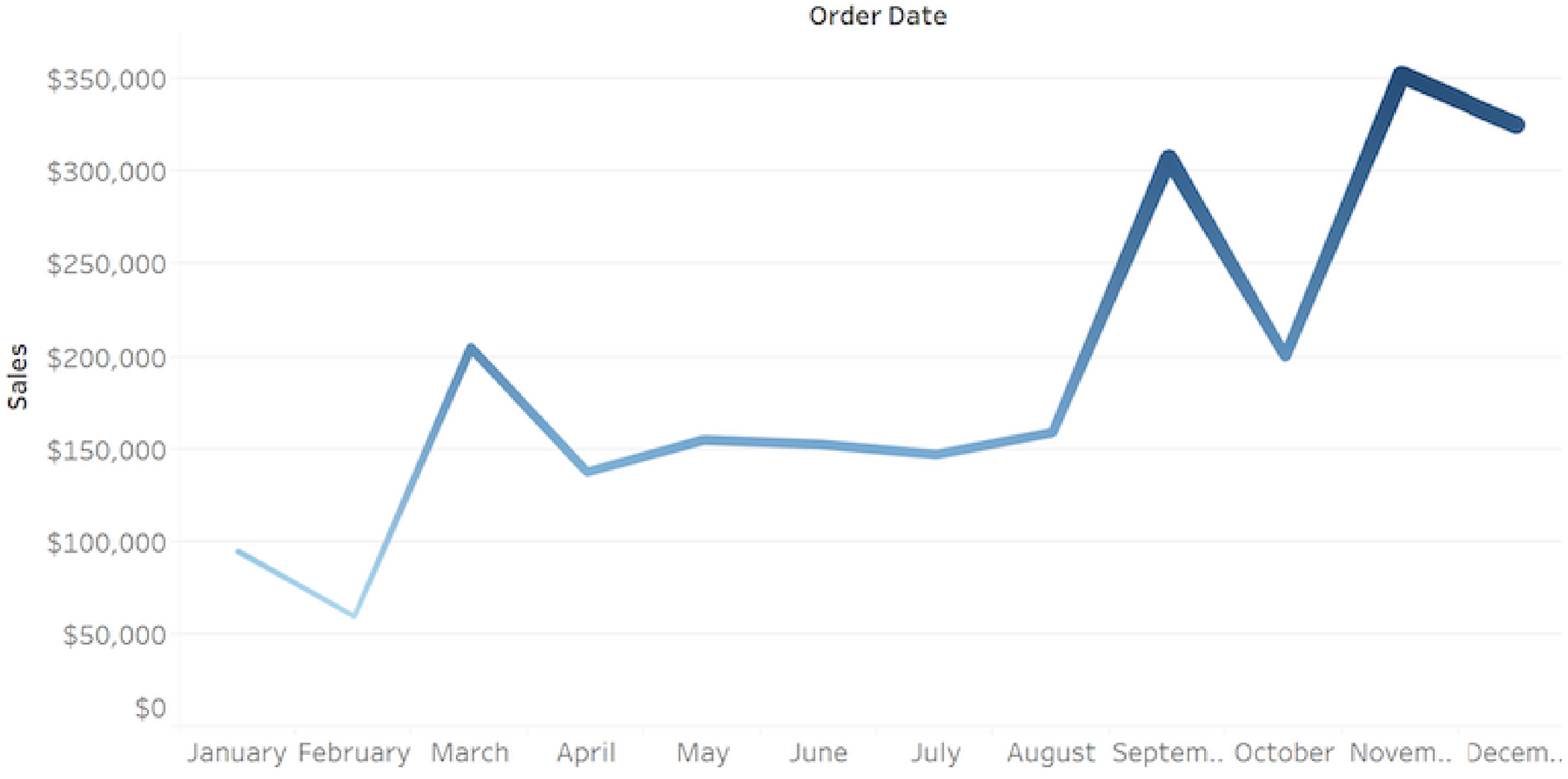
Trends Over Time (Line Chart)



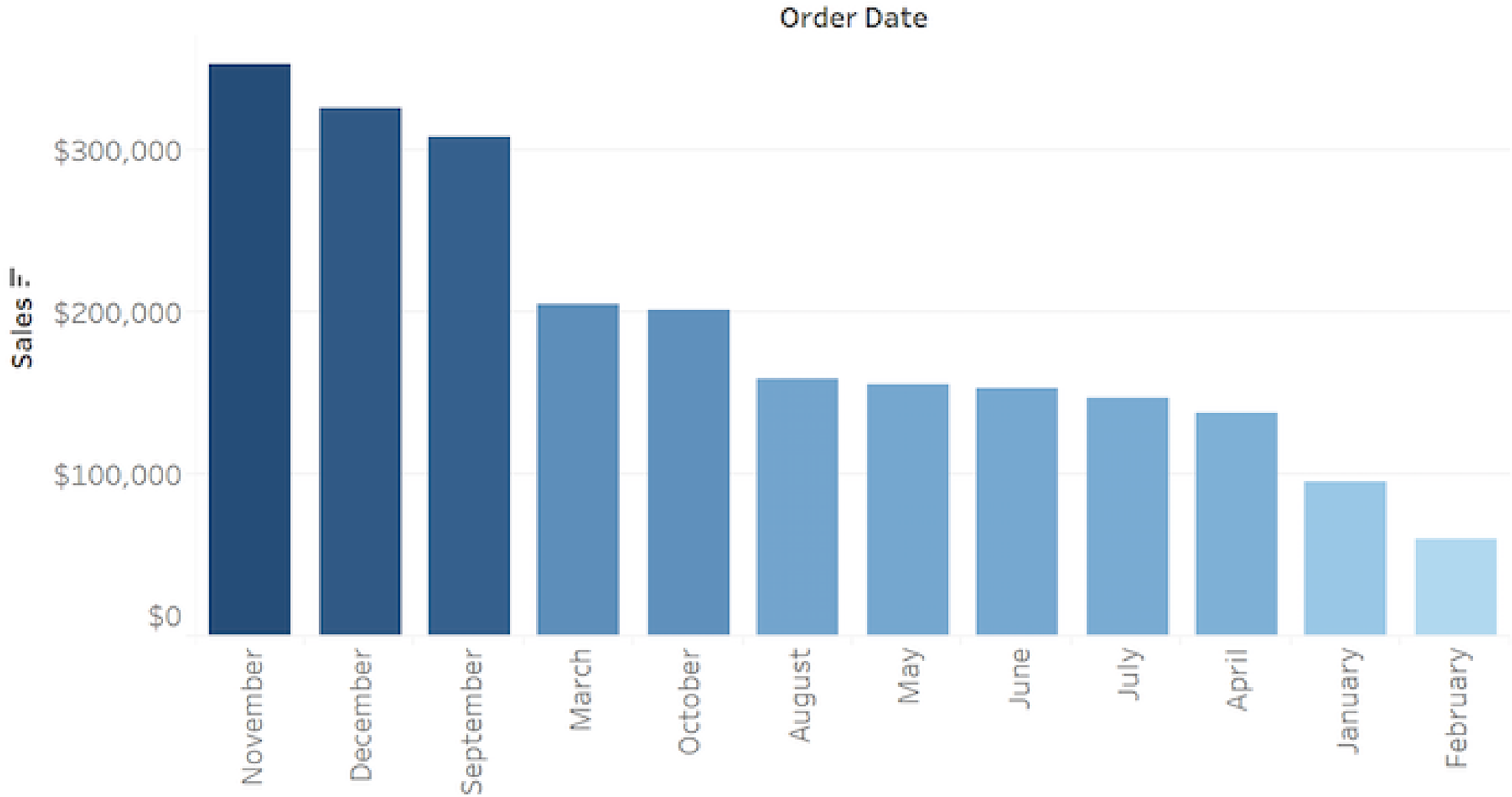
Trends Over Time (Barchart)



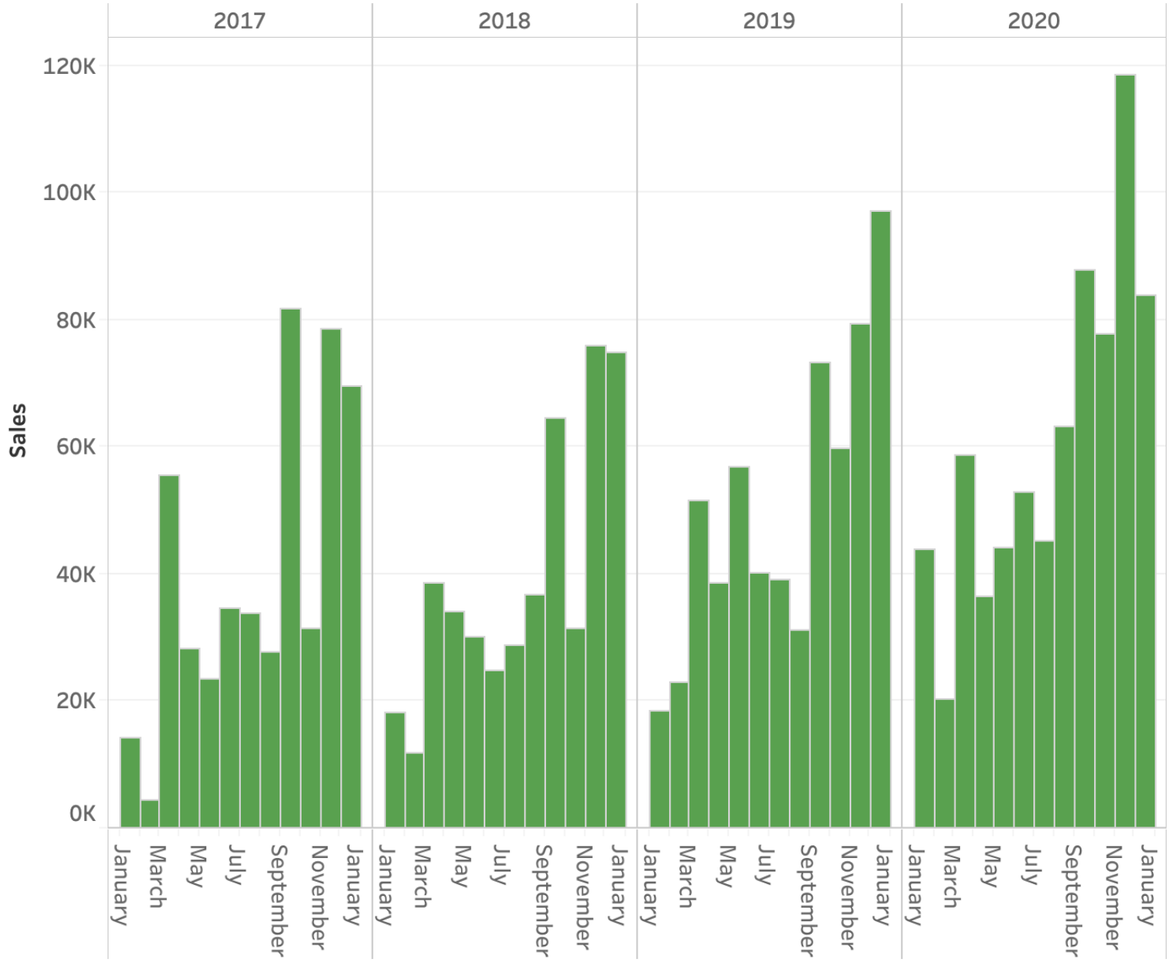
Monthly Trendline of Sales Trends

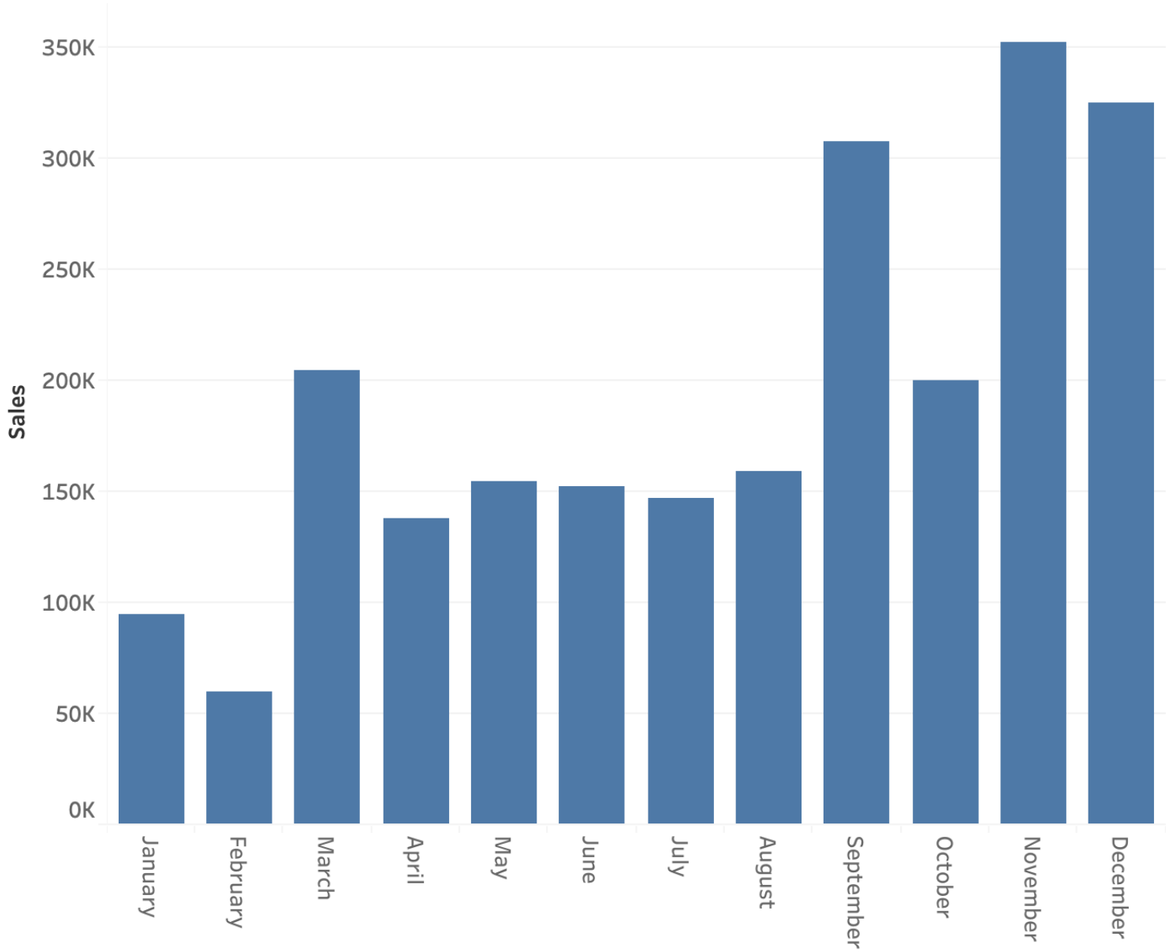


Monthly Pattern of Sales Trends



Continuous vs. discrete





Let's practice!

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Discrete time analysis and Quick Table Calculations

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Slicing and dicing

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