Analytics on Sales Data mart Using Tableau Part 4

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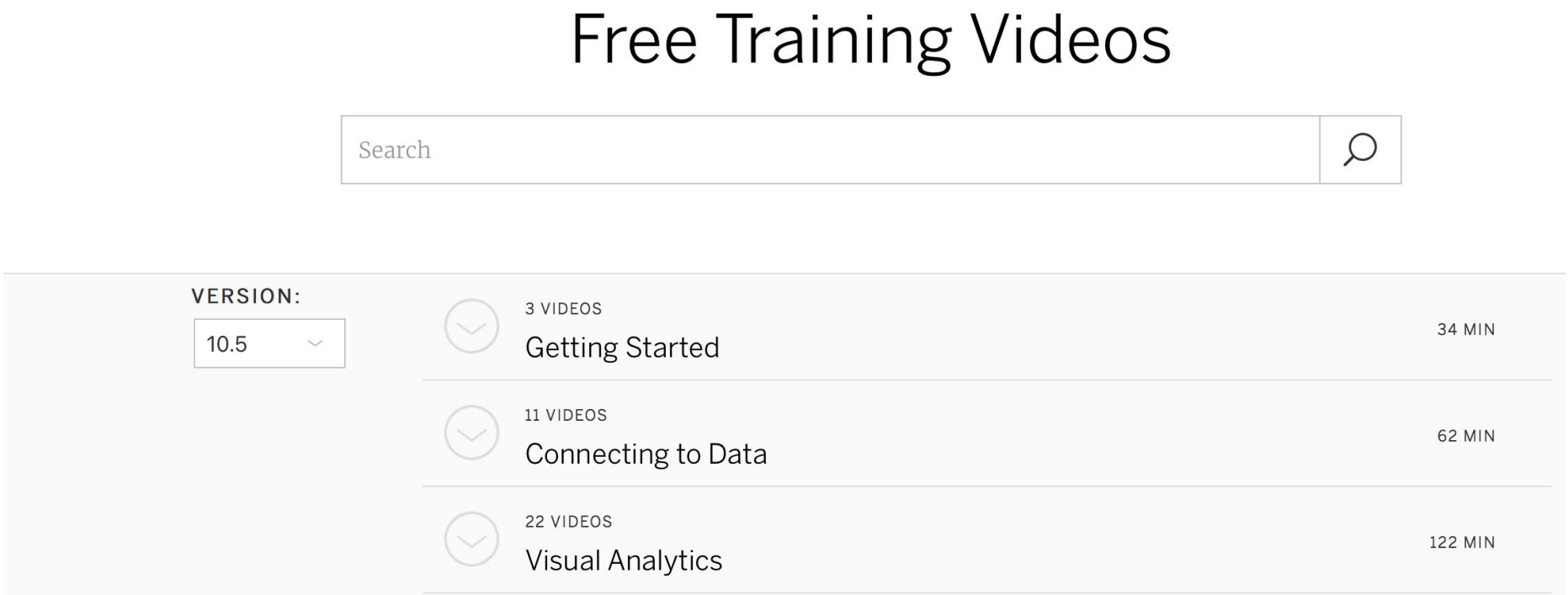
Tableau

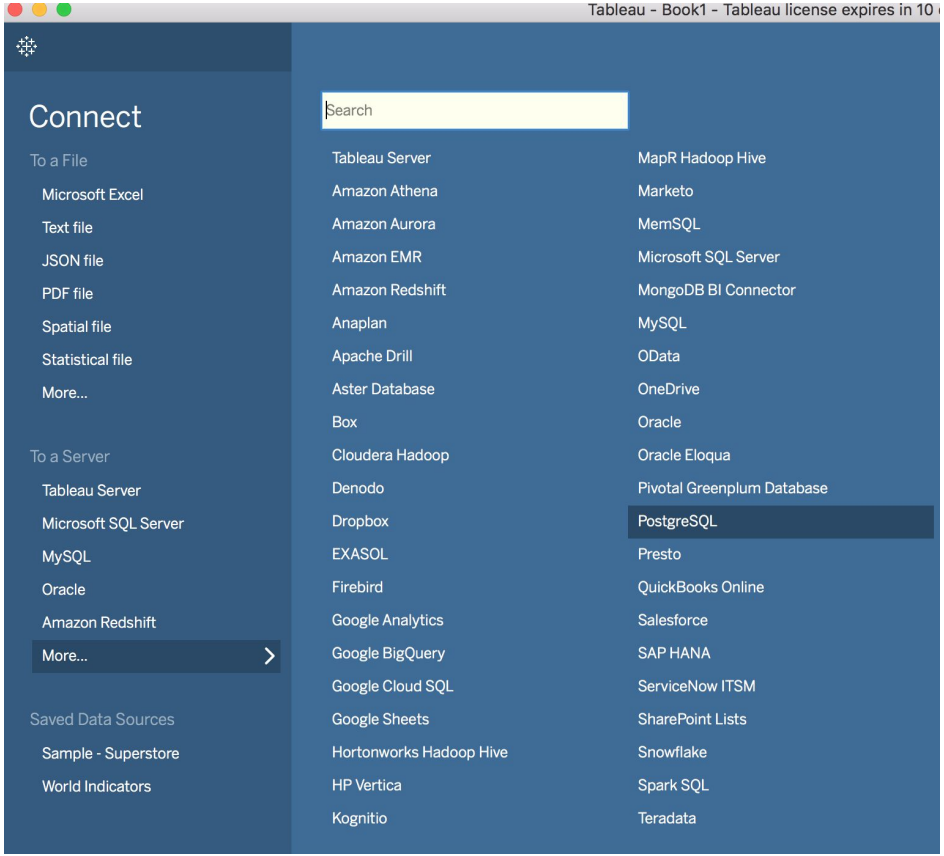
- A commercial software, **flexible** enough to perform **visual analytics** on data from **numerous sources** and **format**
  - Our purpose: Visual analytics on the star schema stored at Postgres server.
- Unfortunately, this is not a Infoviz module
- We will only touch upon the basics of-
  - Connecting to postgres
  - Join tables in tableau
  - Visualize
    - Sales and # transactions by calendar day
    - Average Transaction Value (ATV) per Calendar day of month
    - ATV per Day of a week

Resources

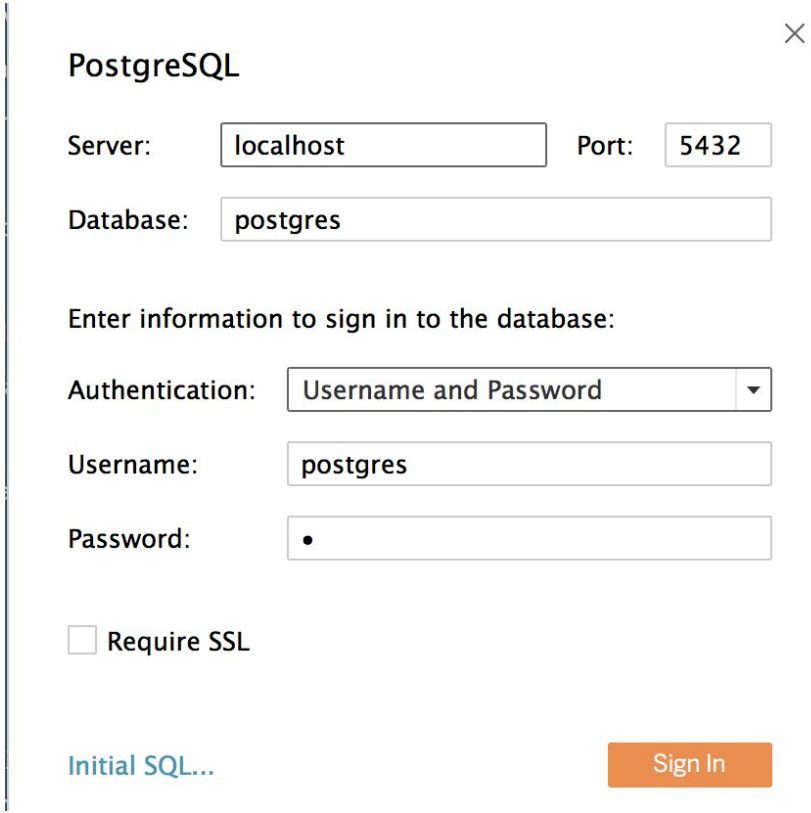
https://www.tableau.com/learn/training/archive?version=10_5



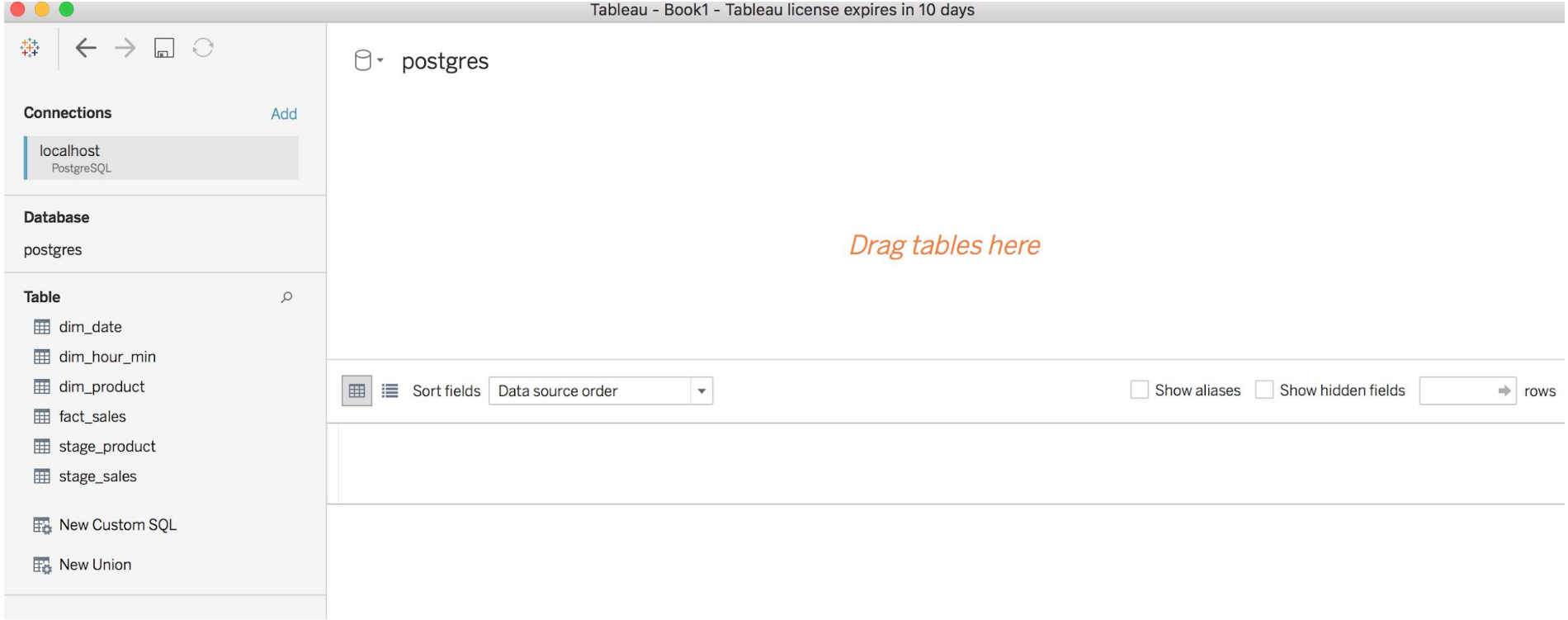
Connect to Postgres



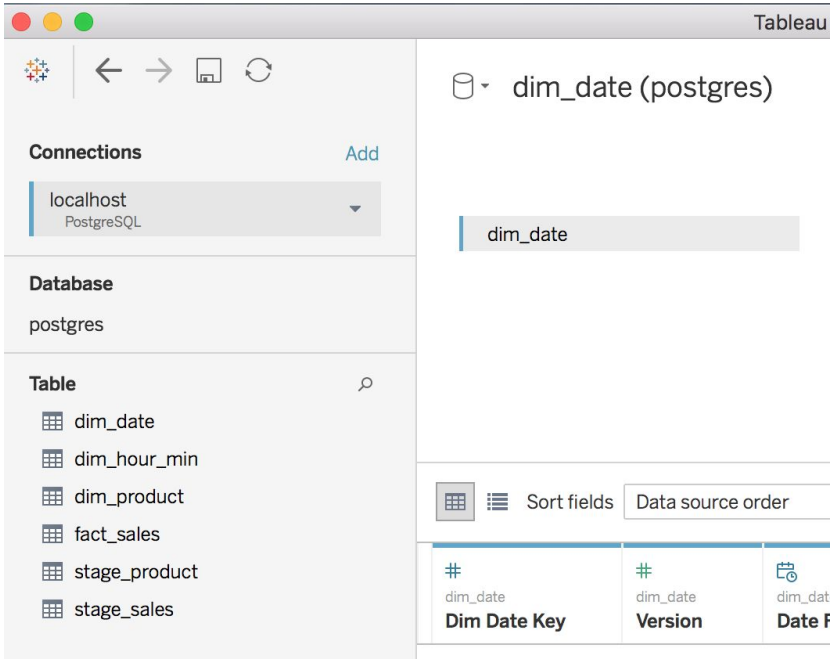
Connect to Postgres

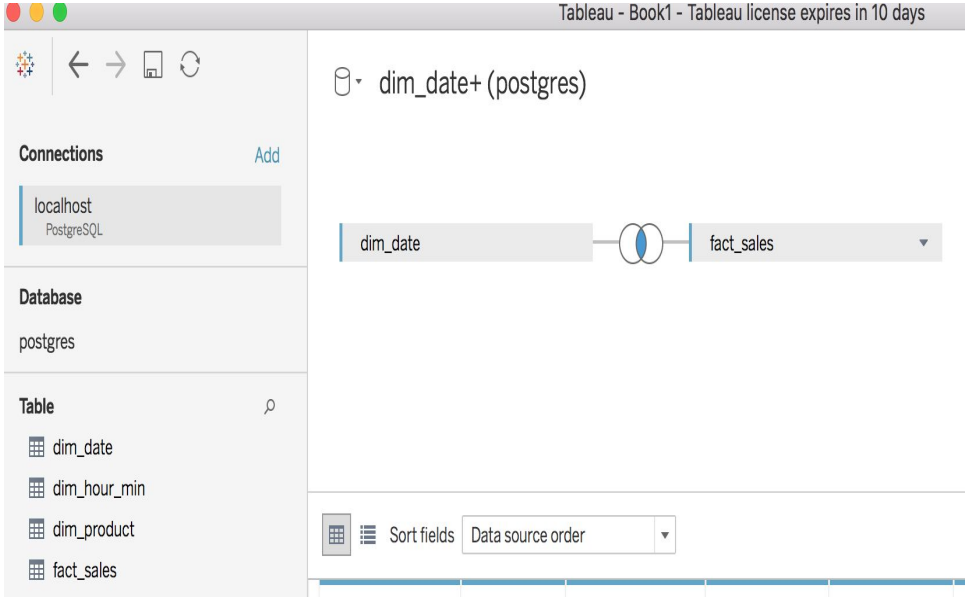


Join dim_date and fact_sales



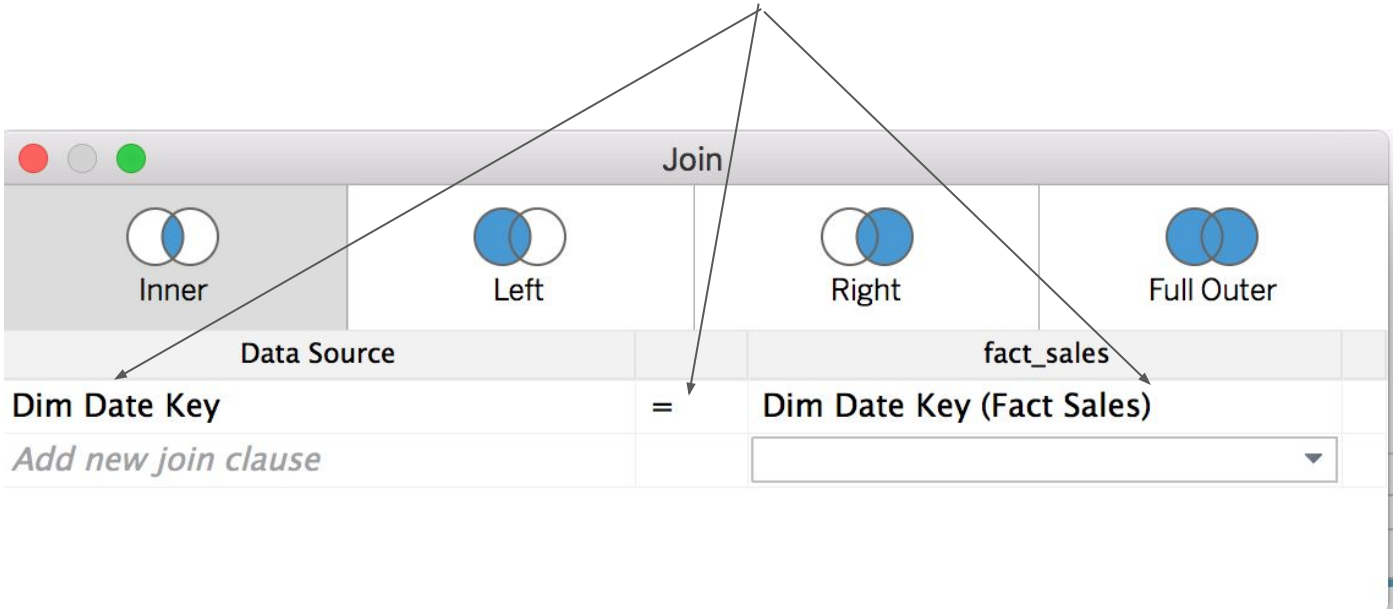
Join dim_date and fact_sales





Join dim_date and fact_sales

Tableau figures out the join key by itself. Join on dim_date_key

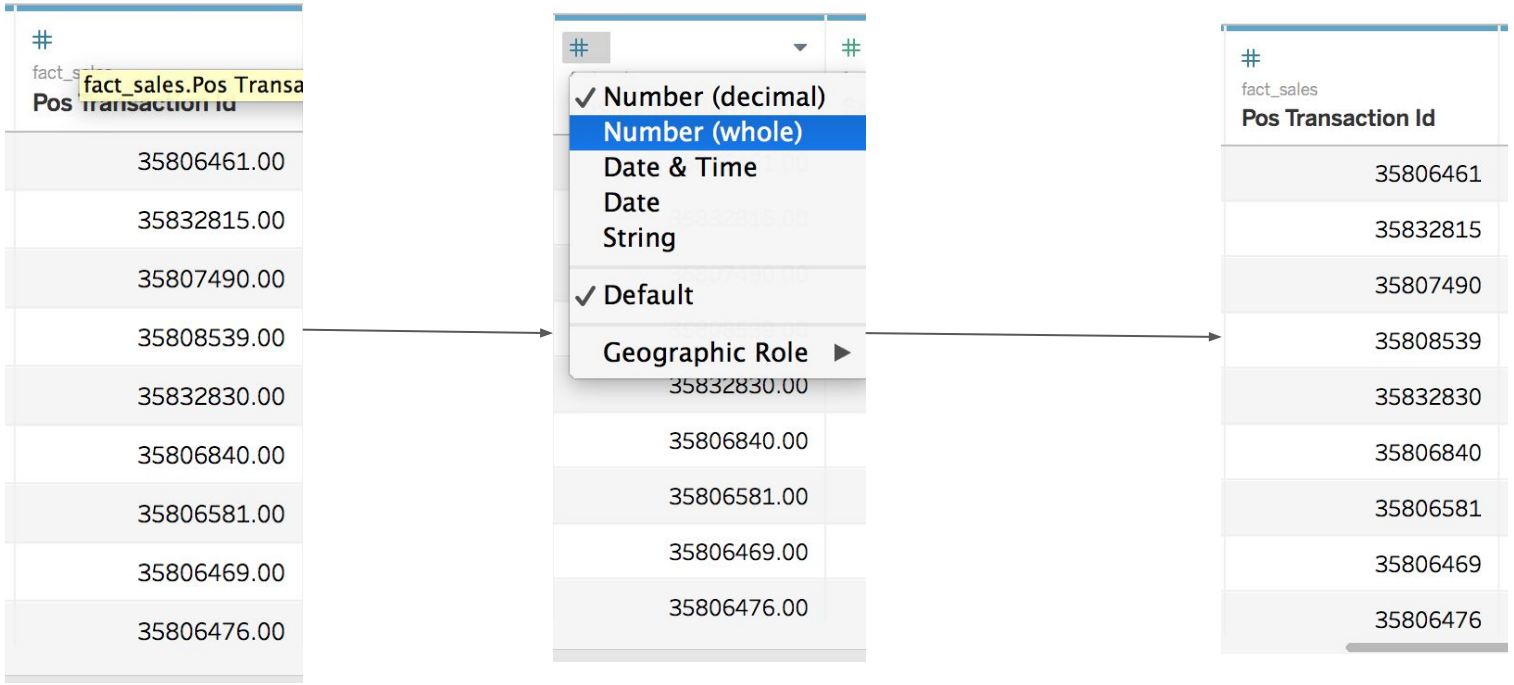


Refresh and check the fields and data types

Sort fields Data source order ☐ Show aliases ☐ Show hidden fields 1,000 rows

# dim_date Dim Date Key	# dim_date Version	dim_date Date From	dim_date Date To	Abc dim_date Date Str	# dim_date Cal Year	# dim_date Cal Month	# dim_date Cal Day Of Year	# dim_date Cal Day C
1827	1	1/1/1900 12:00:00 AM	1/1/2200 12:00:00 AM	20150101	2015	1	1	
1827	1	1/1/1900 12:00:00 AM	1/1/2200 12:00:00 AM	20150101	2015	1	1	
1827	1	1/1/1900 12:00:00 AM	1/1/2200 12:00:00 AM	20150101	2015	1	1	
1827	1	1/1/1900 12:00:00 AM	1/1/2200 12:00:00 AM	20150101	2015	1	1	
1827	1	1/1/1900 12:00:00 AM	1/1/2200 12:00:00 AM	20150101	2015	1	1	
1827	1	1/1/1900 12:00:00 AM	1/1/2200 12:00:00 AM	20150101	2015	1	1	
1827	1	1/1/1900 12:00:00 AM	1/1/2200 12:00:00 AM	20150101	2015	1	1	

Fix some data types (If required)

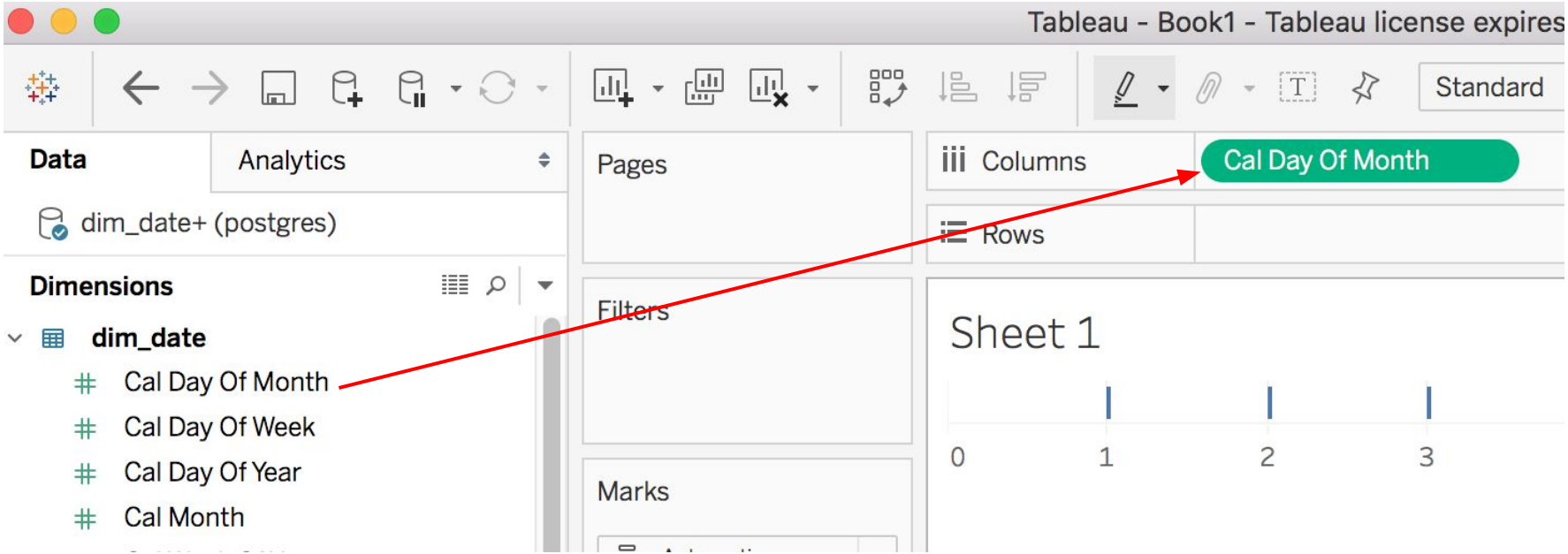


Net Sales by Calendar day

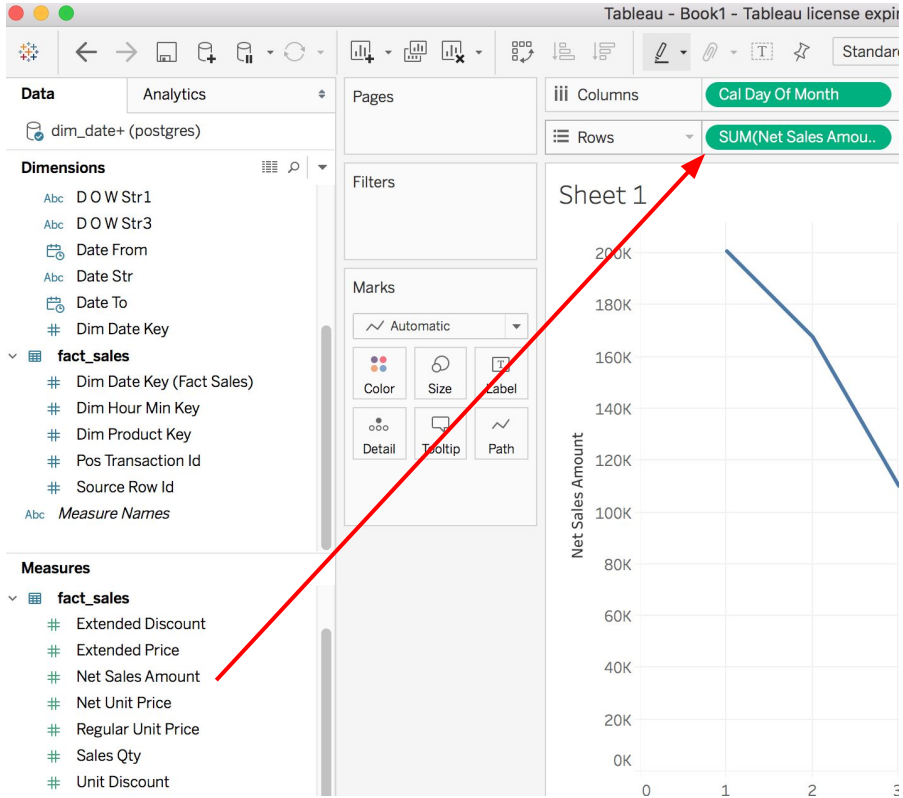
Sheet 1

Net sales $ by calander day

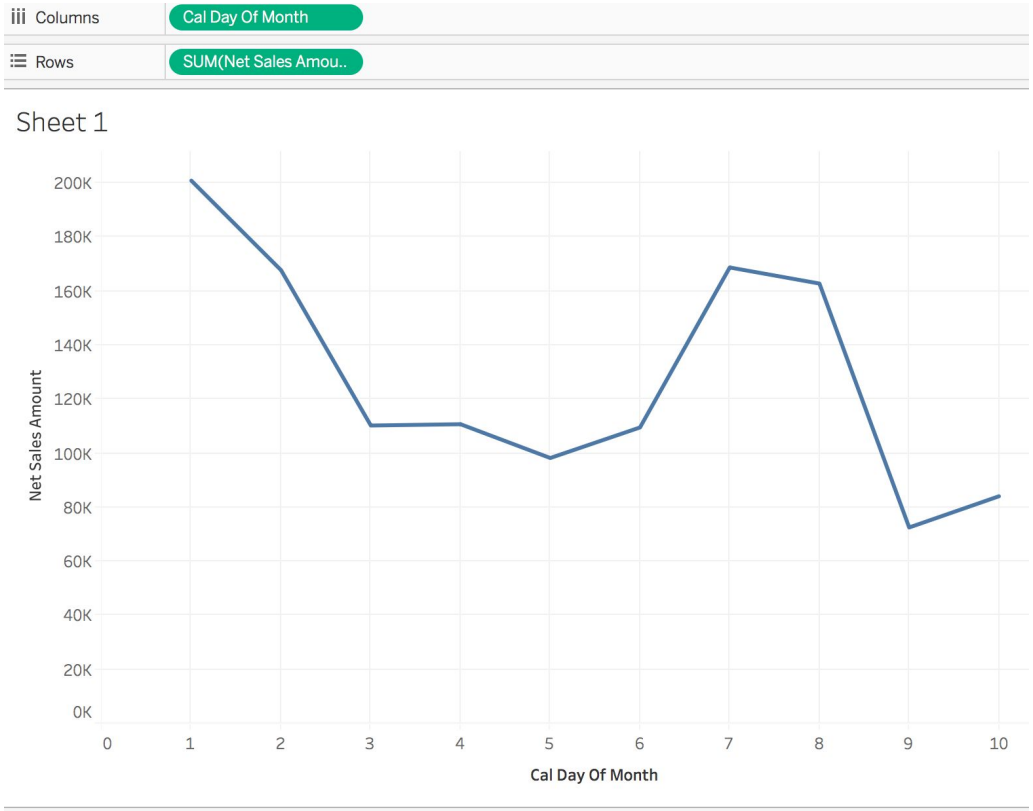
Drag Cal day of month to columns



Drag Net Sales Amount to Rows



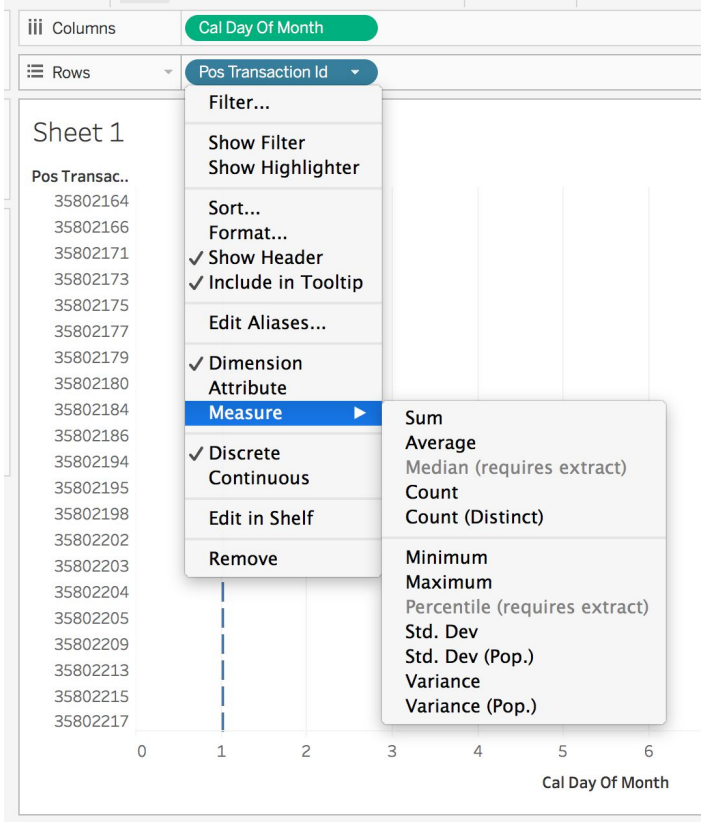
Thats it!


Columns
Cal Day Of Month
Rows
SUM(Net Sales Amou..
Sheet 1
200K
180K
160K
140K
120K
100K
80K
60K
40K
20K
0K
Net Sales Amount
0
1
2
3
4
5
6
7
8
9
10
Cal Day Of Month

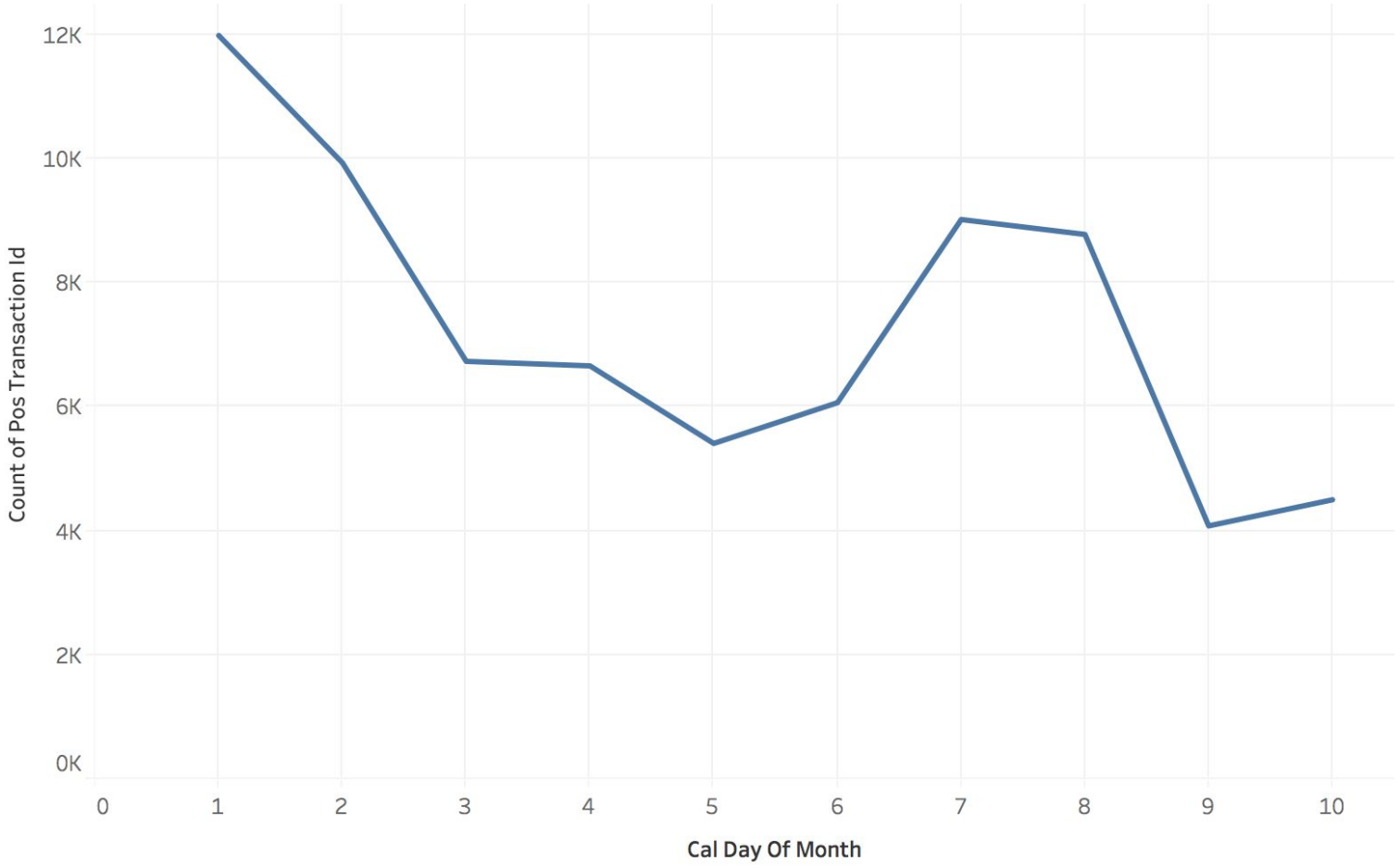
Transaction by calendar day

Sheet 2

Transaction by calendar day - Similar



Change the Measure to Count

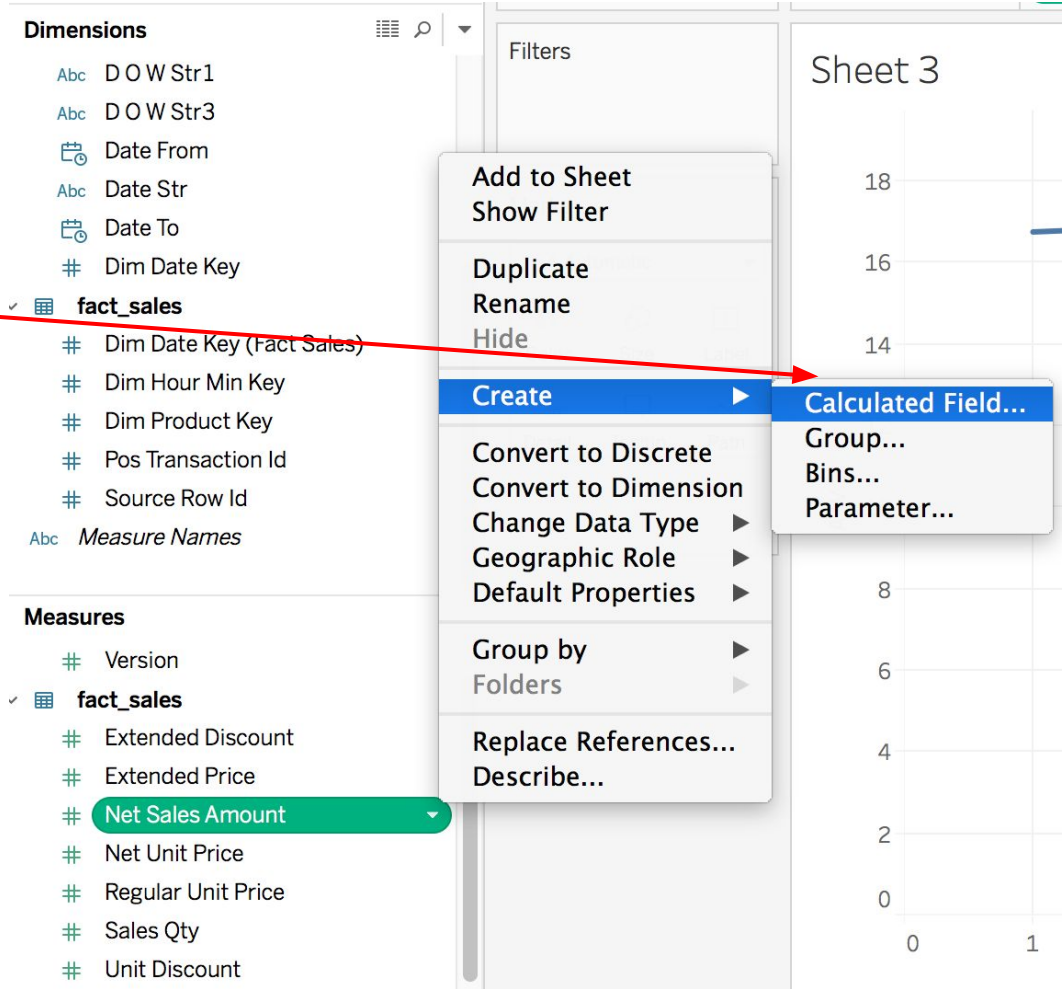

12K
10K
8K
6K
4K
2K
0K
Count of Pos Transaction Id
0
1
2
3
4
5
6
7
8
9
10
Cal Day Of Month

How is the ATV by calendar day of January

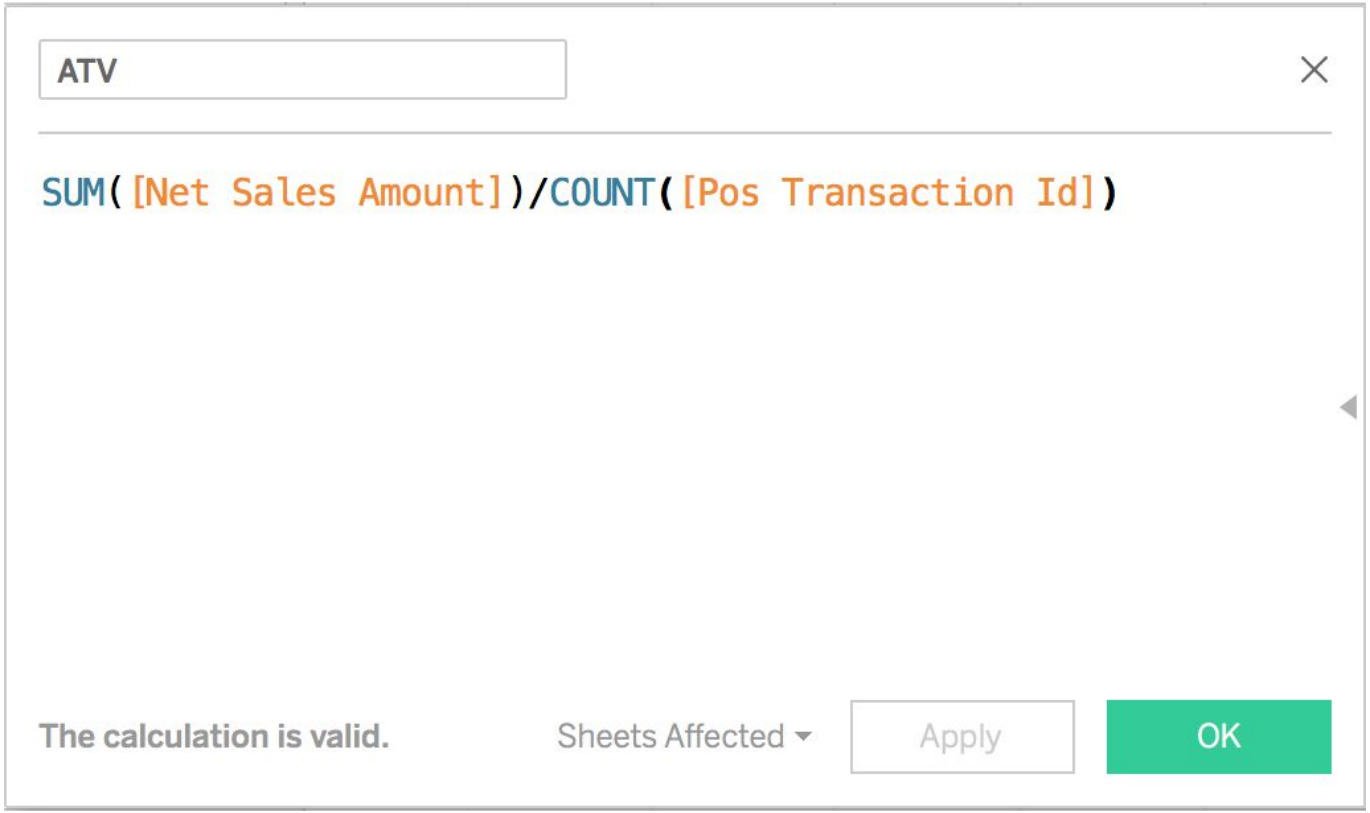
Sheet 3

Compute ATV

Needs to create
Calculated Field.



Write the equation



There is no need to specify time period.

When used as a row, Tableau automatically aggregates based on the period in the column

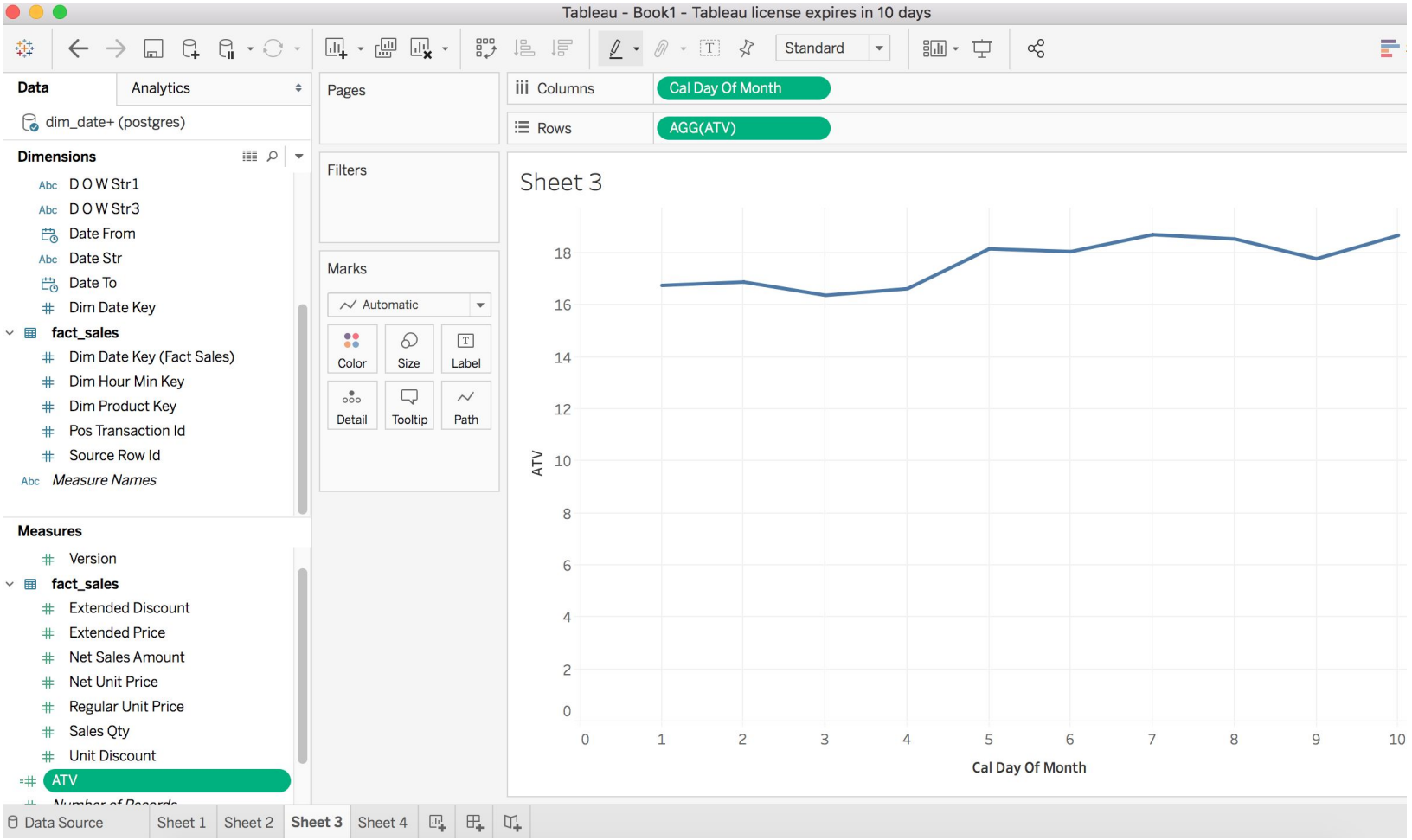


Tableau - Book1 - Tableau license expires in 10 days
Standard
Data
Analytics
dim_date+ (postgres)
Dimensions
D O W Str1
D O W Str3
Date From
Date Str
Date To
Dim Date Key
fact_sales
Dim Date Key (Fact Sales)
Dim Hour Min Key
Dim Product Key
Pos Transaction Id
Source Row Id
Measure Names
Measures
Version
fact_sales
Extended Discount
Extended Price
Net Sales Amount
Net Unit Price
Regular Unit Price
Sales Qty
Unit Discount
ATV
Pages
Filters
Marks
Automatic
Color
Size
Label
Detail
Tooltip
Path
Columns
Cal Day Of Month
Rows
AGG(ATV)
Sheet 3
ATV
Cal Day Of Month
0
2
4
6
8
10
12
14
16
18
0
1
2
3
4
5
6
7
8
9
10
Data Source
Sheet 1
Sheet 2
Sheet 3
Sheet 4

How is the ATV by day of Week

Sheet 4

Tableau - Book1 - Tableau license expires in 10 days

Standard

Data | Analytics

dim_date+ (postgres)

Dimensions

- Abc D O W Str1
- Abc D O W Str3
- Date From
- Abc Date Str
- Date To
- Dim Date Key
- **fact_sales**
  - Dim Date Key (Fact Sales)
  - Dim Hour Min Key
  - Dim Product Key
  - Pos Transaction Id
  - Source Row Id
- Abc *Measure Names*

Measures

- Version
- **fact_sales**
  - Extended Discount
  - Extended Price
  - Net Sales Amount
  - Net Unit Price
  - Regular Unit Price
  - Sales Qty
  - Unit Discount
- ATV

Pages

Filters

Marks

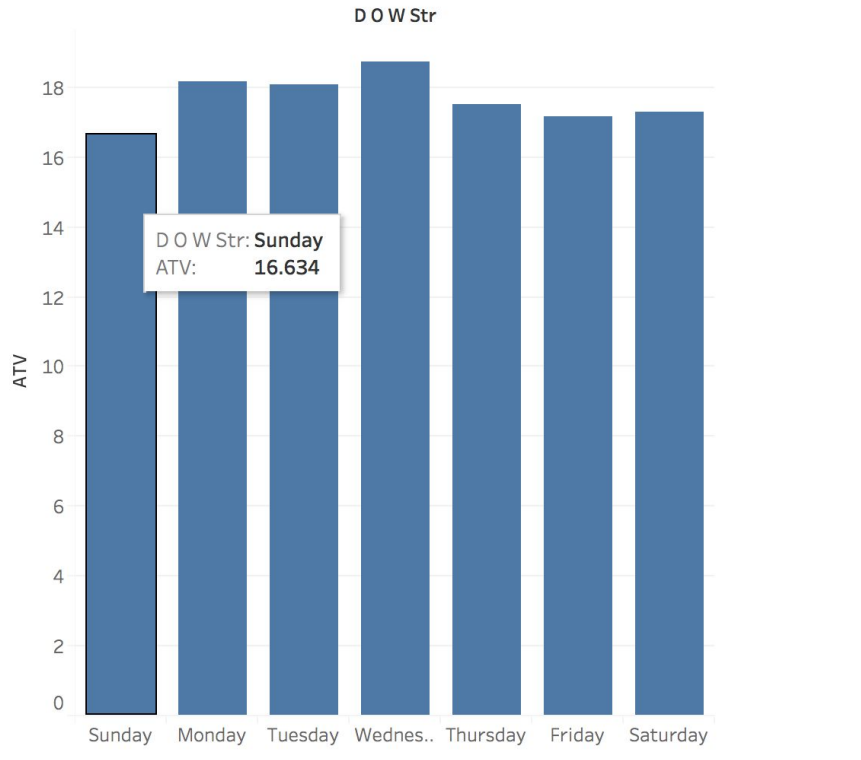
Automatic

Color | Size | Label | Detail | Tooltip

Columns: D O W Str

Rows: AGG(ATV)

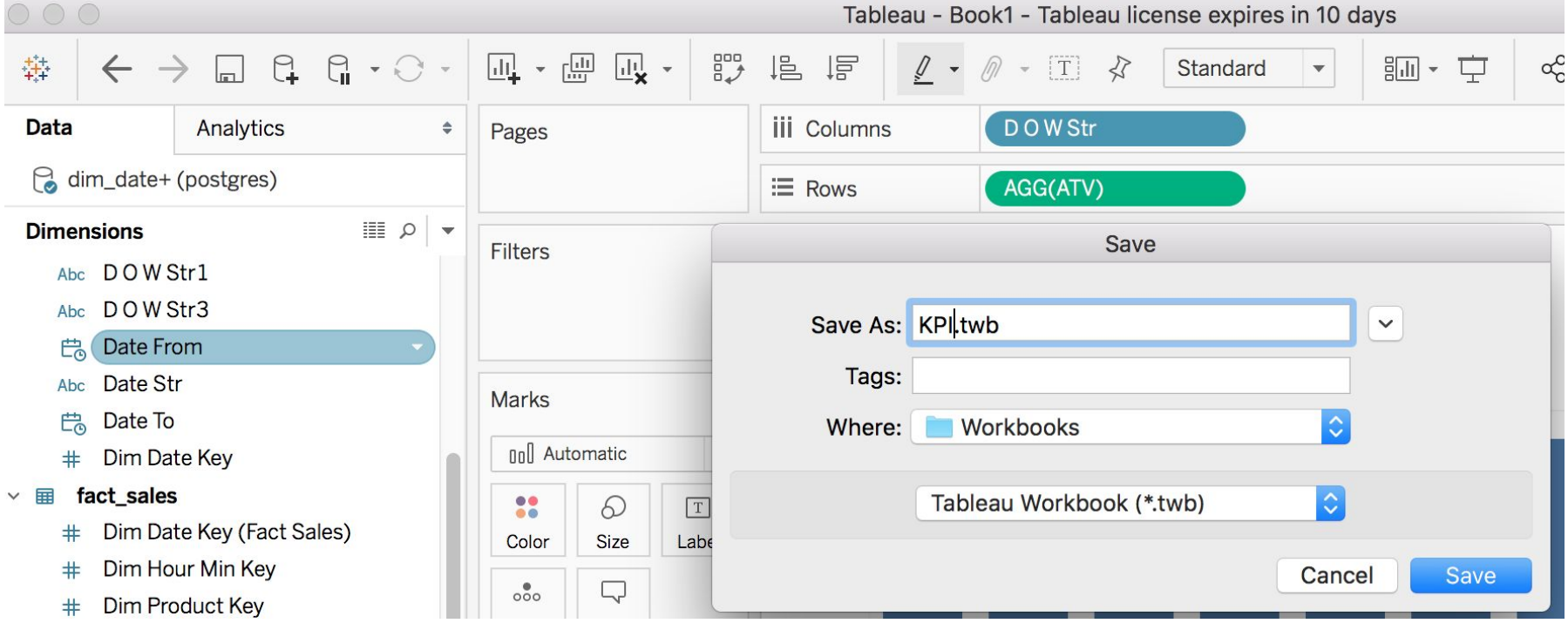
Sheet 4



Data Source | Sheet 1 | Sheet 2 | Sheet 3 | Sheet 4

Finally

Save your work as a tableau workbook from File>Save as menu.



END