

Tableau Integration with Python - Step by Step

What is Python

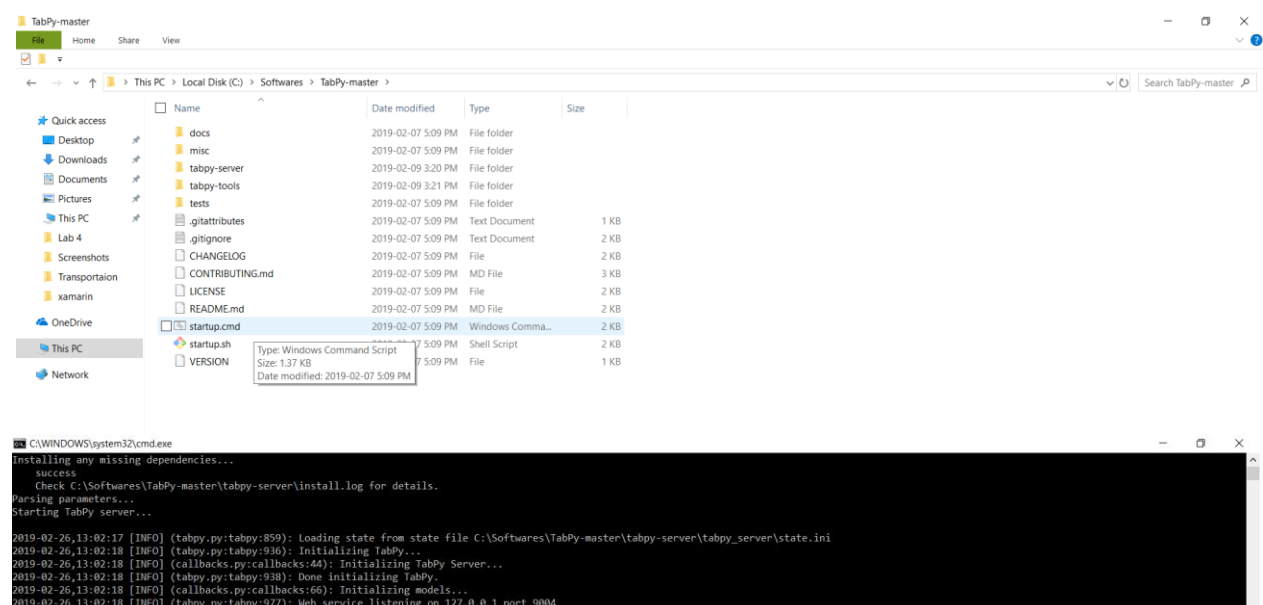
- Python is a widely used general-purpose programming language, popular among academia and industry alike.
- It provides a wide variety of statistical and machine learning techniques and is highly extensible.
- Together, Python and Tableau is the data science dream team to cover any organization's data analysis needs.
- In 2013 Tableau introduced the R Integration [since Tableau 8.1], the ability to call R scripts in calculated fields using R Server [Rserve()].
- With the release of Tableau 10.1, you can use Python scripts as part of your calculated fields in Tableau, just as you've been able to do with R. I have used Tableau 10.3 professional Edition and Python 3.6.
- The Python Integration happens through the Tableau Python Server - [TabPy].

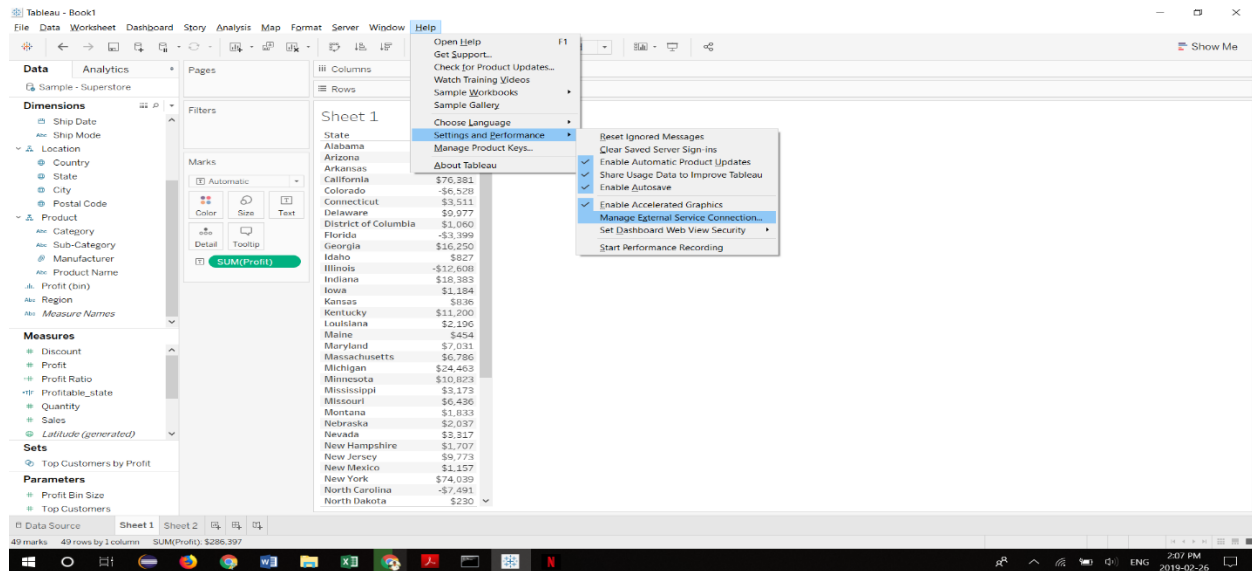
Install tableau python server: TabPy

- You can Download TabPy from the Link : [GitHub - tableau/TabPy: Execute Python code on the fly and display results in Tableau visualizations](#)
- Click on the Clone or download button in the upper right corner (see below) of the TabPy repository page, downloading the zip file and extracting it.

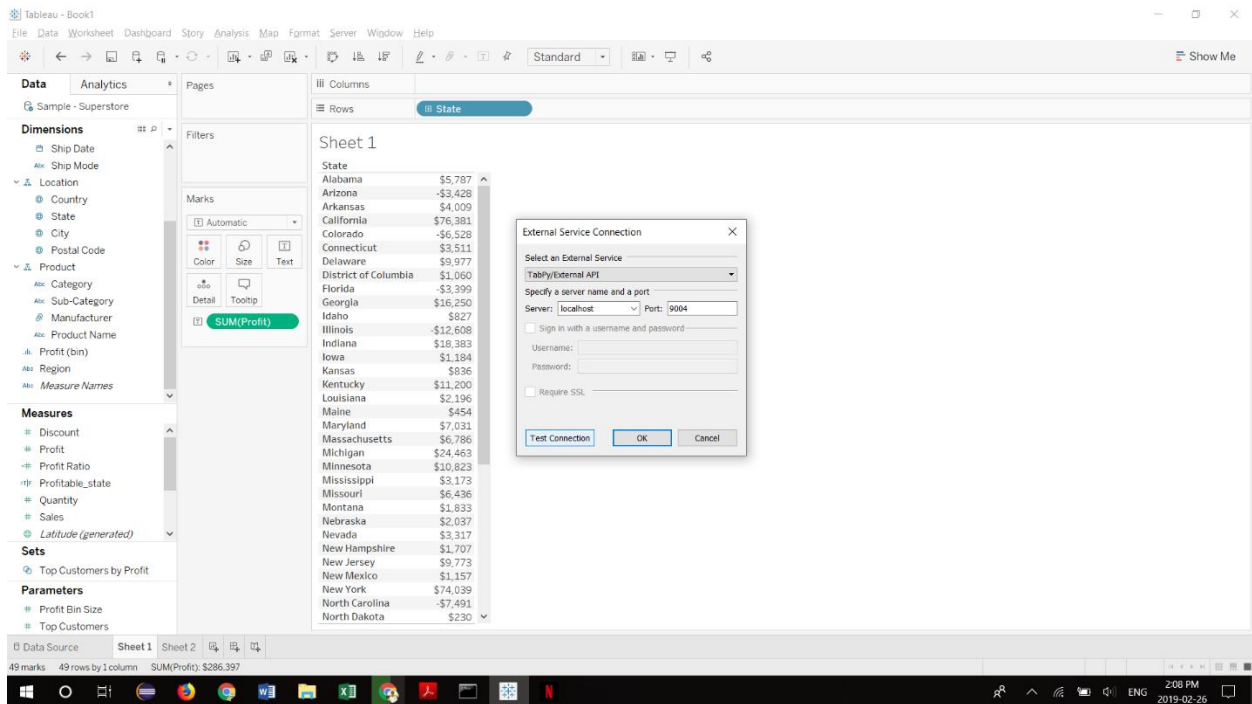
Extract TabPy-master.zip

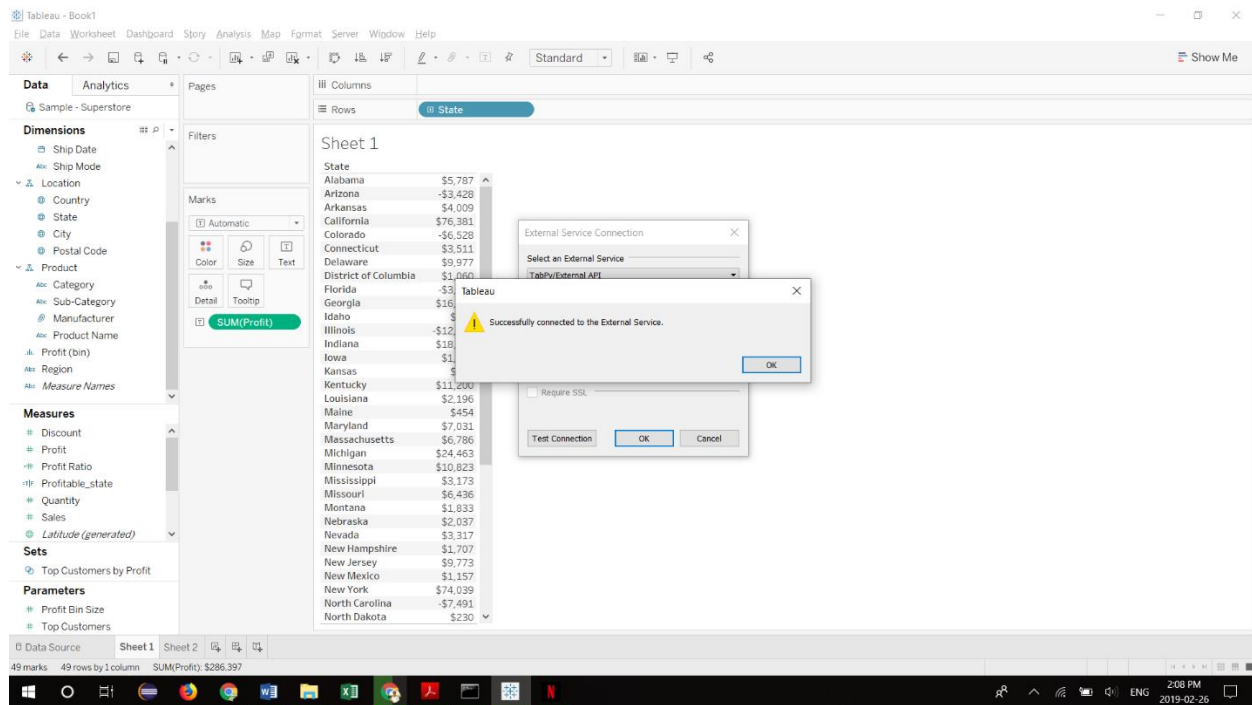
- Within the TabPy-master directory, execute setup.bat (or setup.sh if you are on Mac).
- This script downloads and installs Python, TabPy and all necessary dependencies.
- After completion, TabPy starts up and listens on port 9004.



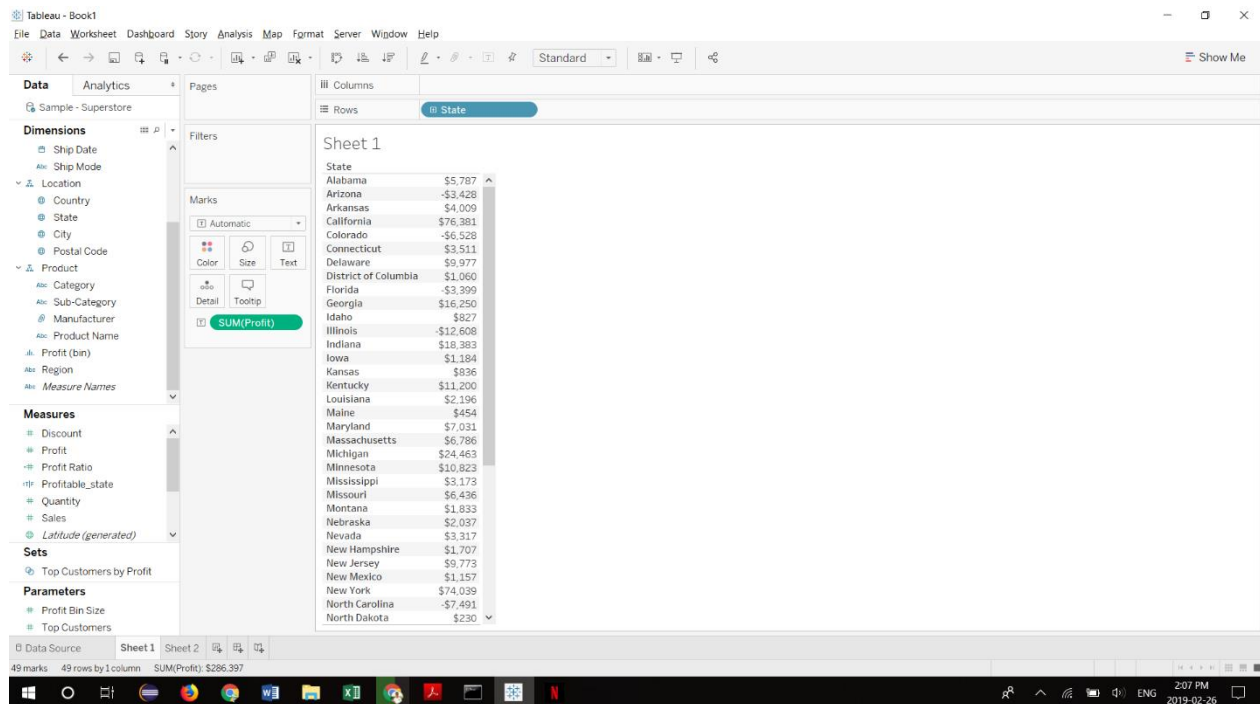


- Open Tableau and use Superstore dataset.
- Help > Settings and Performance > Manage External Service Connection..
- Select TabPy/External API



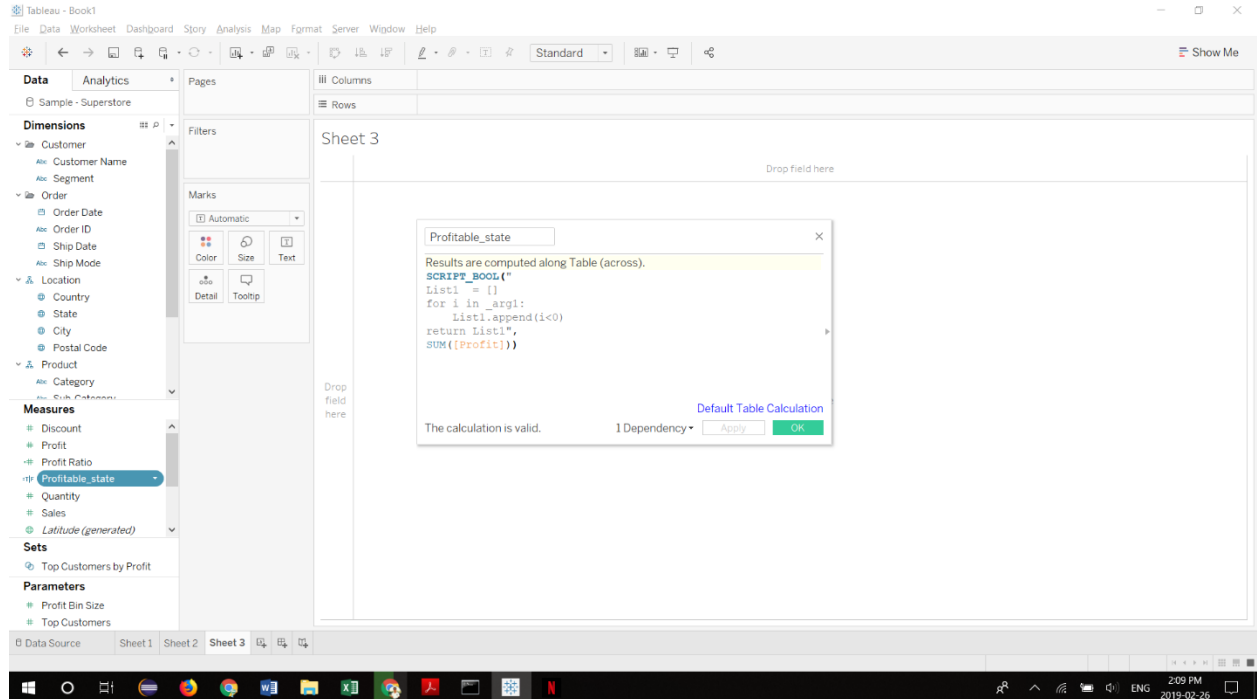
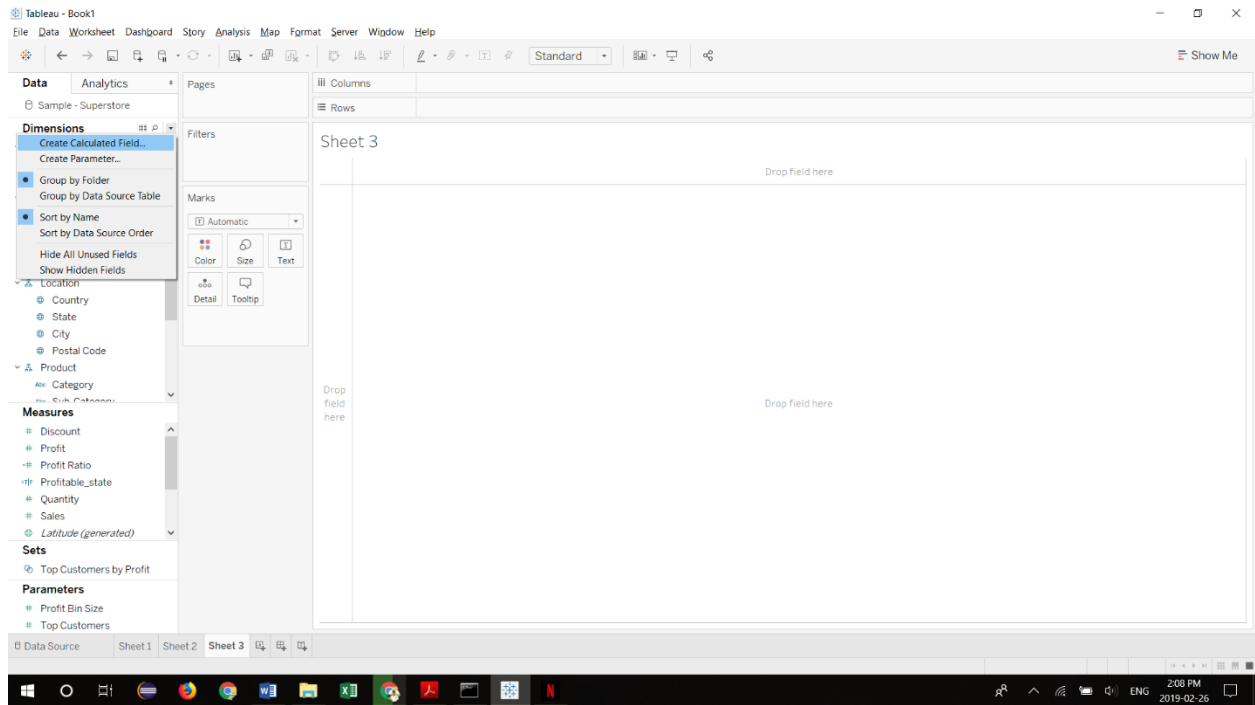


- With this message we have successfully setup the TabPy and Tableau.

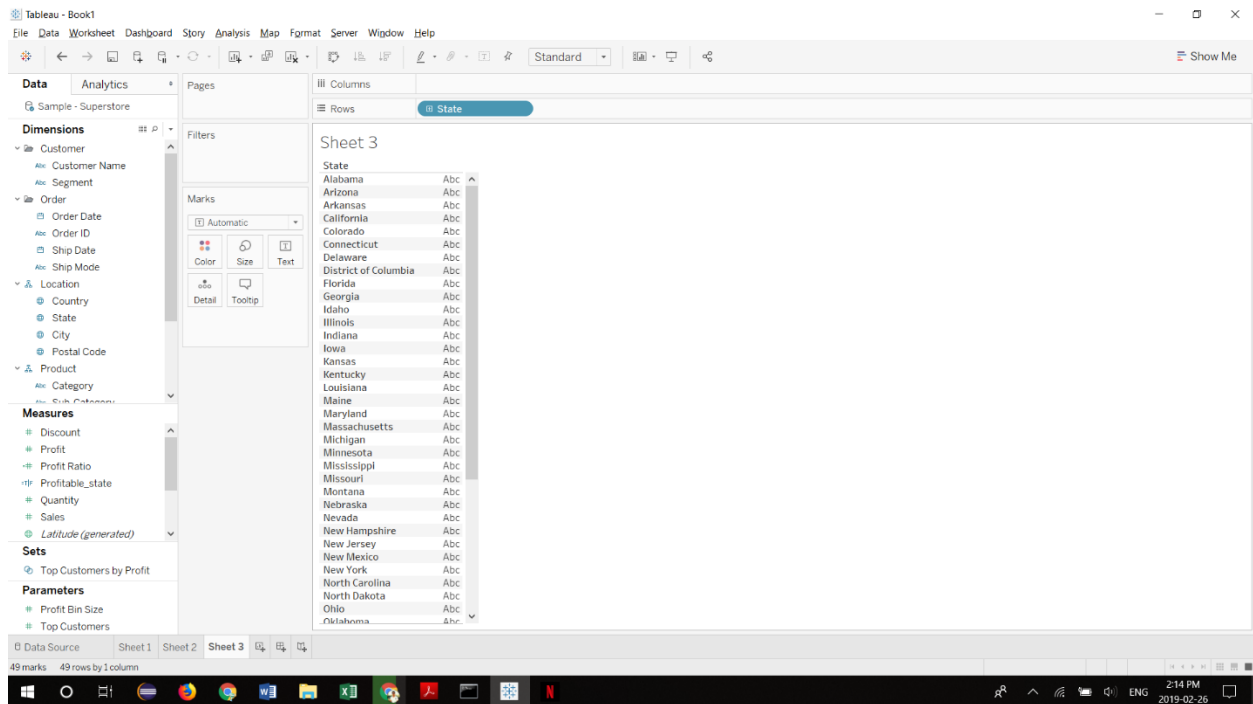


- State and Sum (Profit) sheet. But now we want to identify states with profit (+).

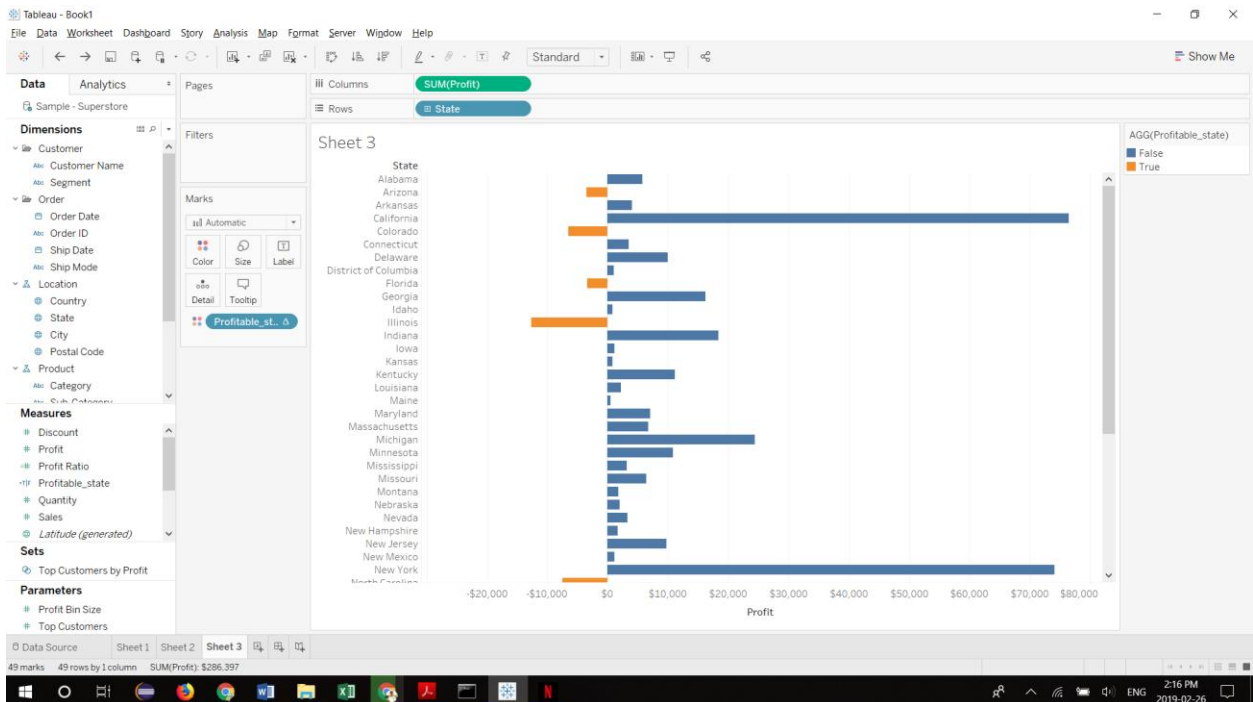
- We have use SCRIPT_BOOL, which return True if the value of that column is positive otherwise False.



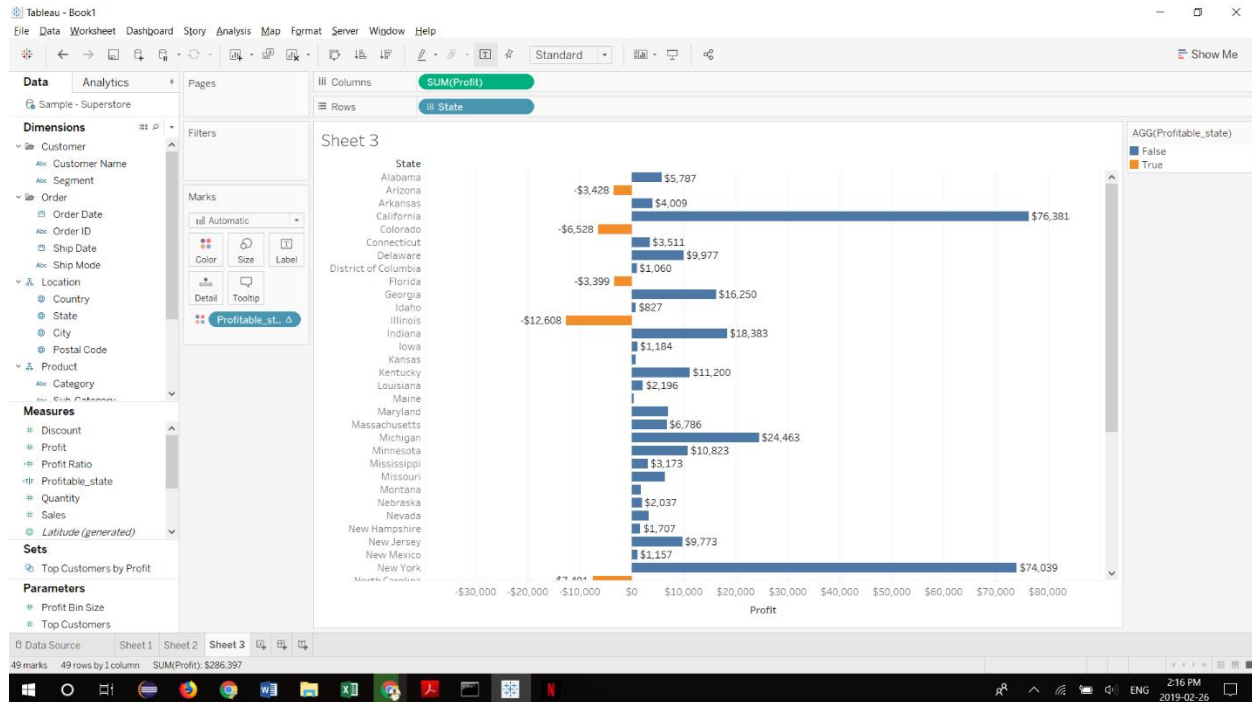
- Drag State field to rows.



- Add SUM(profit) to columns.
- Drag New Created Profitable_state field to Marks – Color.



- Click on Hide Mark label for more text details



- Replace according field to sheet if you want need color according to range.

