

# Tableau

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# Goals

1. What is Tableau?
2. How to load data
3. Interactive visualization
4. Visualization types
5. Export results

# 1. What is Tableau?

- Developed out of Stanford student's PhD project
- Designed for exploration of large multi-dimensional datasets
- When Excel just isn't enough ...

# Tableau Versions

- Server (>\$10K)
  - All capabilities
  - Can publish results to web & restrict access
- Desktop (\$1000 / \$2000)
  - Runs on personal computer
  - Can publish results only to Tableau's website
- Online (\$500)
  - Cloud version, hosted by Tableau
- Public
  - Free
  - All data hosted publically (everything online)
  - 50 MB of data

# Student Program

- Available for **free** to post-secondary students.
- <http://www.tableausoftware.com/academic/students>

# Free Trial

- <http://www.tableausoftware.com/products/desktop>

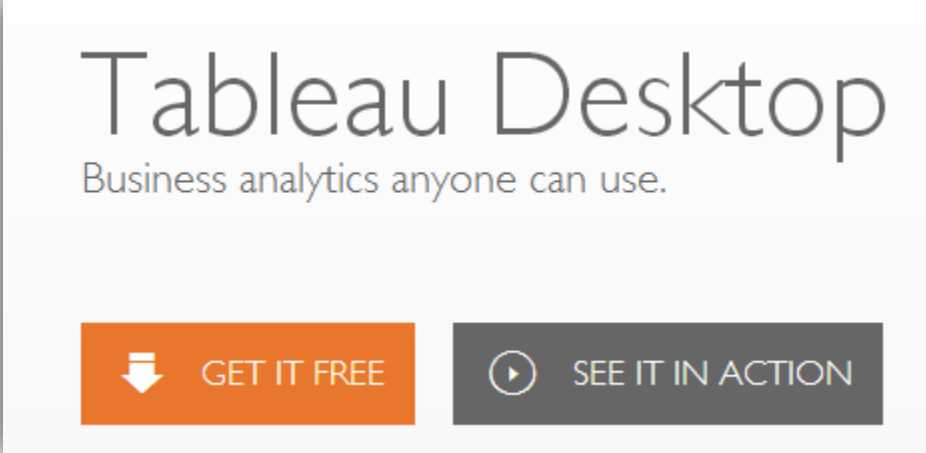


A promotional banner for Tableau Desktop. The banner has a white background with a subtle shadow. At the top, the text "Tableau Desktop" is written in a large, grey, sans-serif font. Below it, the tagline "Business analytics anyone can use." is written in a smaller, grey, sans-serif font. At the bottom, there are two buttons: an orange button on the left with a white download icon and the text "GET IT FREE", and a dark grey button on the right with a white play icon and the text "SEE IT IN ACTION".

Tableau Desktop

Business analytics anyone can use.

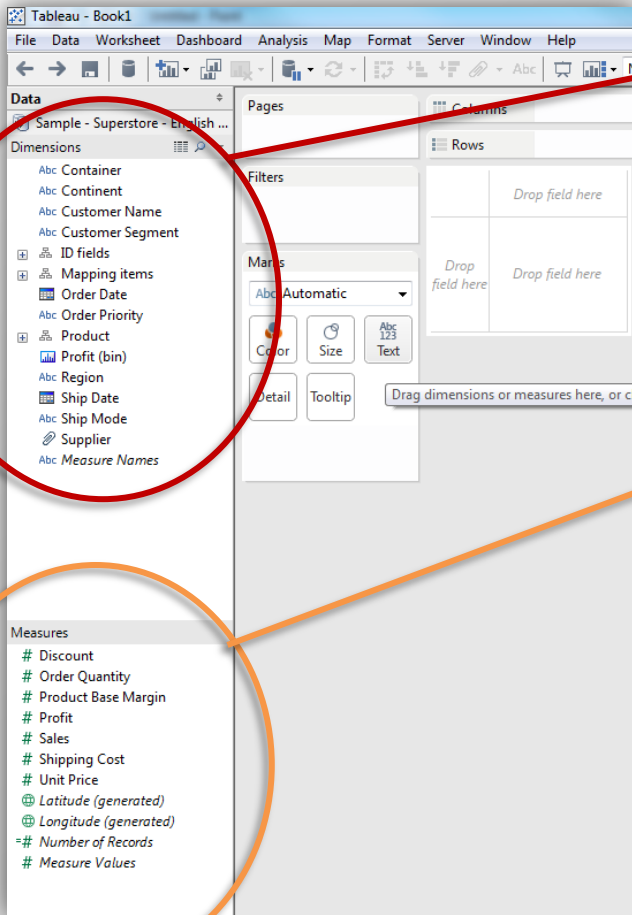
 GET IT FREE

 SEE IT IN ACTION

## 2. How to Load Data

- File
- Database
- Online Source
  
- Import all at once
- Or connect “live” ...Tableau will use latest values.
  
- Weather data: <http://goo.gl/FNepDz>

# 3. Interactive Visualizations



## Dimensions:

- These are items that we might want to categorize our data by.

## Measures:

- The numbers & metrics that we want to analyze.



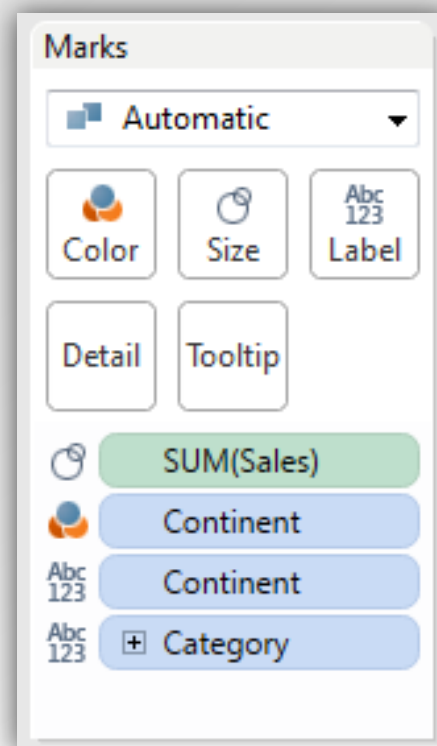
# Pick a Visualization

- Show Me Window
- Highlights valid alternatives
- Also can Ctrl-click dimensions & measures to get “Show Me” alternatives



# Marks

- Map measure/dimension to different type of visual variable
  - Color/shade (when categorical vs ordered)
  - Size
  - Label
  - Detail
  - Tooltip
- Click to customize each element



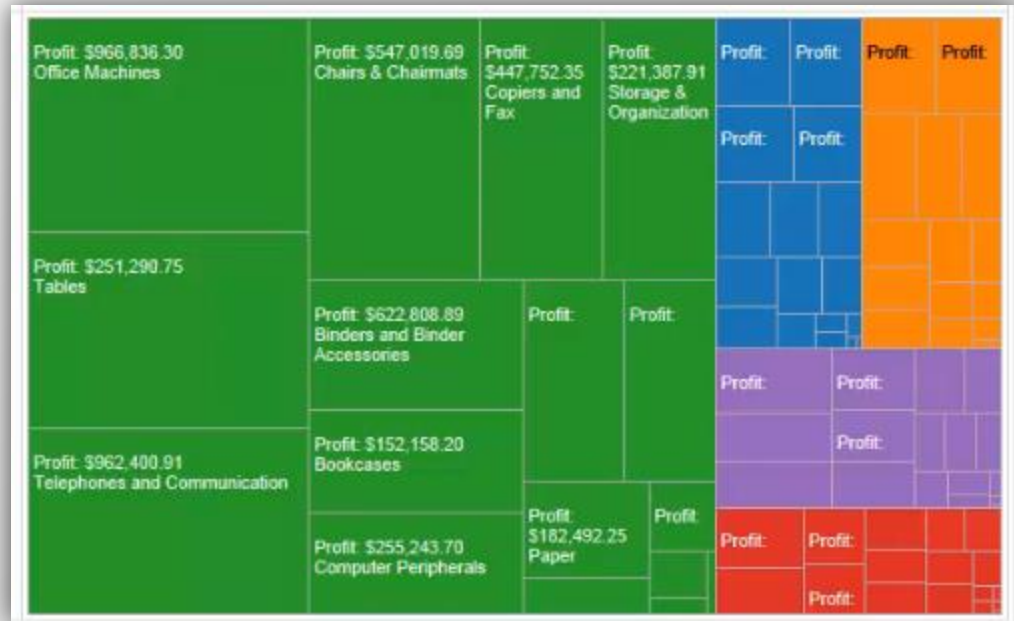
# Dashboard

- Link Visualizations together
- Apply filter to all worksheets
- Use map as filter

# 4. Special Visualization Types

- Tree Maps
- Word Clouds
- Bubble Charts
- Bollinger Bands

# Tree Maps



- 1 dimension & 1 measure
- Very compact representation
- Map another data field to colour to expose more data.
- Add to a dimension to rows to get a Bar Chart of TreeMaps

# Word Cloud (Wordle)

- 1 dimension & 1 measure
- Steps: Measure to size, Dimension to Text, Change Marks from “Automatic” to “Text”
- Watch out: inexact



# Bubble Cloud

- 1 dimension & 1 measure
- Steps: Measure to size, Dimension to Label, Change Marks from “Automatic” to “Circle”
- Very similar to TreeMap but no hierarchy of enclosure.

# Bollinger Bands



<http://goo.gl/Um9YTY>



# Bollinger Bands

- Add data file (Apple)
- Make rows Close for each
- Create moving average calculated field
- `window_avg(avg([Close]),-[Period],0)`
- `window_stdev(avg([Close]),-[Period],0)`

# 5. Exporting Results

## Option 1:

- Print to PDF
- Save screenshot

## Option 2:

- Save to Tableau Public
  - Data becomes publicly accessible
  - Visualization is interactive

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# More Info

- Training videos
  - <http://www.tableausoftware.com/learn/training>
- Tableau Visualization of the Day
  - <http://www.tableausoftware.com/public/community/viz-of-the-day>