3-Matplotlib

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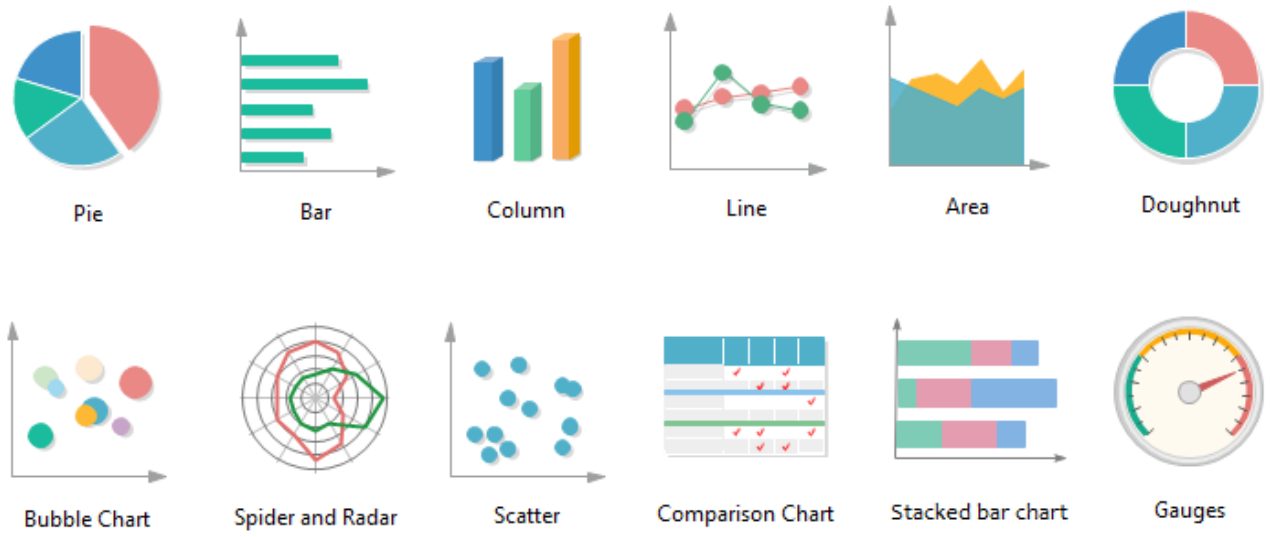
مكتبة Matplotlib

هي مكتبة تستخدم في مرحلة عرض البيانات (Data Visualization) لإنشاء رسوم بيانية تفاعلية (static, animated, and interactive visualizations) بلغة Python وتعتبر مكتبة خاصة بالرسومات ثنائية الأبعاد.

أنواع الرسوم البيانية:



How to Choose the Right Chart - A Complete Chart Comparison - Edraw

تثبيت مكتبة Matplotlib

عن طريق كتابة الأمر التالي:

```
!pip3 install matplotlib
```

أمثلة لبعض الرسمات المُضللة (Misleading Charts)

USA Today

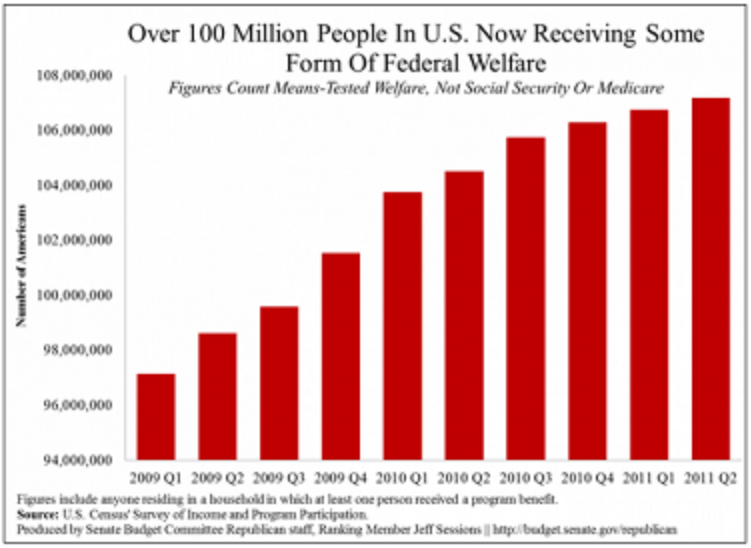
The y-axis doesn't start from zero, giving an invalid indicator about the amount of change during months.

THE BLOG

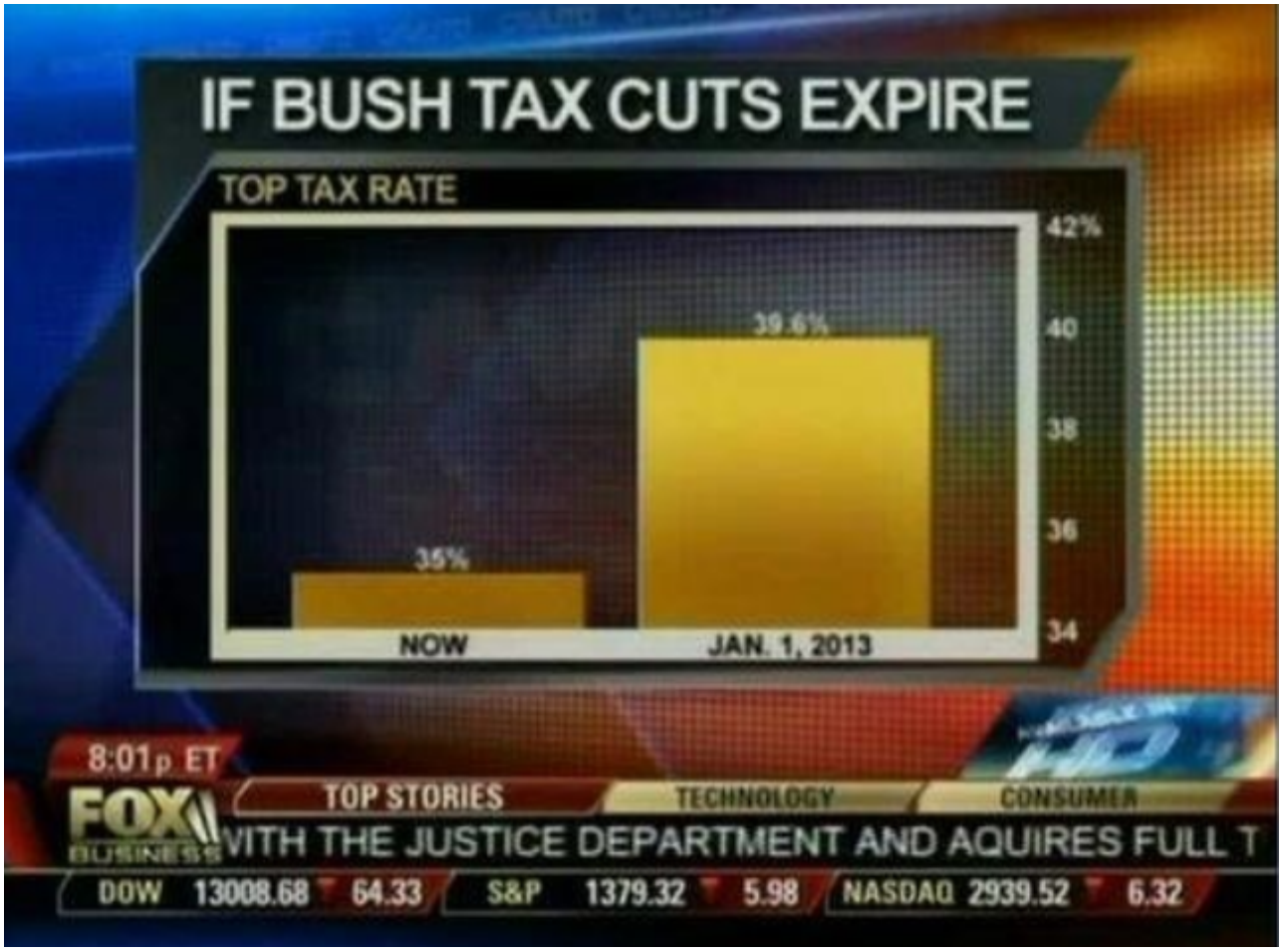
Over 100 Million Now Receiving Federal Welfare

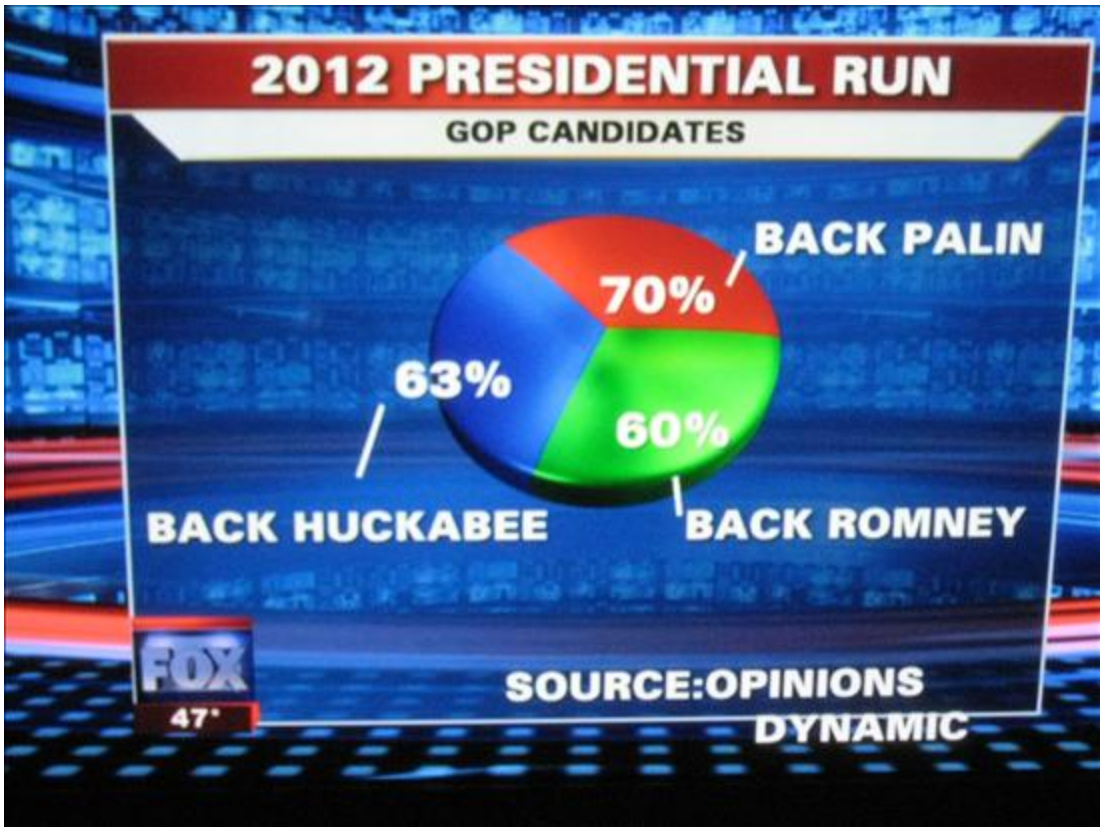
2:40 PM, AUG 8, 2012 • BY DANIEL HALPER

A new chart set to be released later today by the Republican side of the Senate Budget Committee details a startling statistic: "Over 100 Million People in U.S. Now Receiving Some Form Of Federal Welfare."



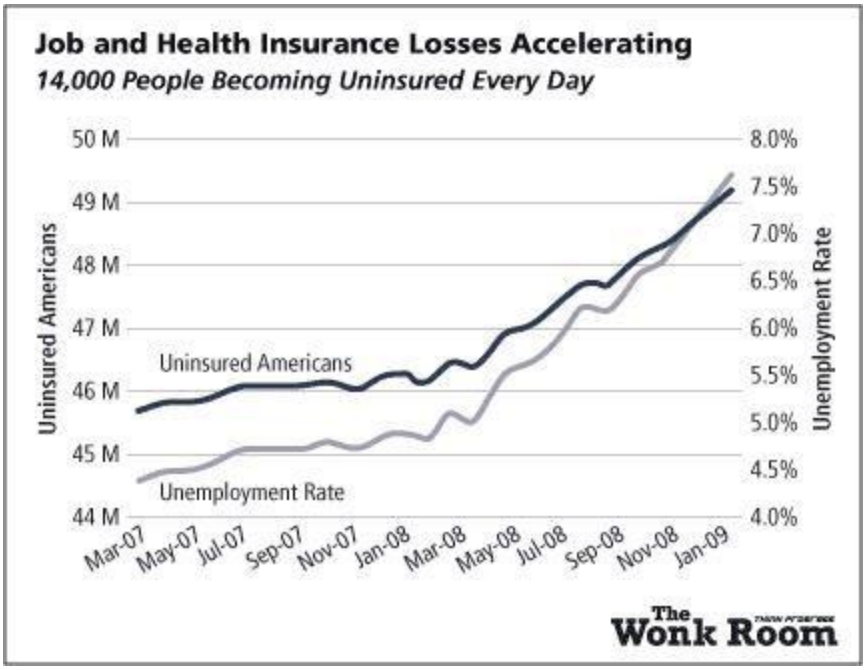
Fox News


IF BUSH TAX CUTS EXPIRE
TOP TAX RATE
42%
40
38
36
34
39.6%
35%
NOW
JAN. 1, 2013
8:01p ET
FOX BUSINESS
TOP STORIES
TECHNOLOGY
CONSUMER
VITH THE JUSTICE DEPARTMENT AND AQUIRES FULL T
DOW 13008.68 64.33
S&P 1379.32 5.98
NASDAQ 2939.52 6.32



If you calculate the categories in this pie chart it will be more than 100%

The Wonk Room



There are two axes for y with different scales.

المصادر:

- https://matplotlib.org/
- https://matplotlib.org/cheatsheets/
- https://matplotlib.org/cheatsheets/cheatsheets.pdf
- https://matplotlib.org/stable/api/markers_api.html
- https://matplotlib.org/stable/api/_as_gen/matplotlib.pyplot.legend.html
- https://matplotlib.org/stable/gallery/color/named_colors.html
- https://matplotlib.org/stable/tutorials/colors/colors.html
- https://matplotlib.org/2.1.1/api/_as_gen/matplotlib.pyplot.plot.html
- Wes McKinney, 2018, Python for Data Analysis, 2ed edition, O'Reilly Media, US.
- https://www.datapine.com/blog/misleading-data-visualization-examples/
- https://chen5595.cems.umn.edu/SameStats-DifferentGraphs.pdf
- https://www.statisticshowto.com/probability-and-statistics/descriptive-statistics/misleading-graphs/