



#3: Intro to Data Visualization

January 24, 2017

Visual Encodings

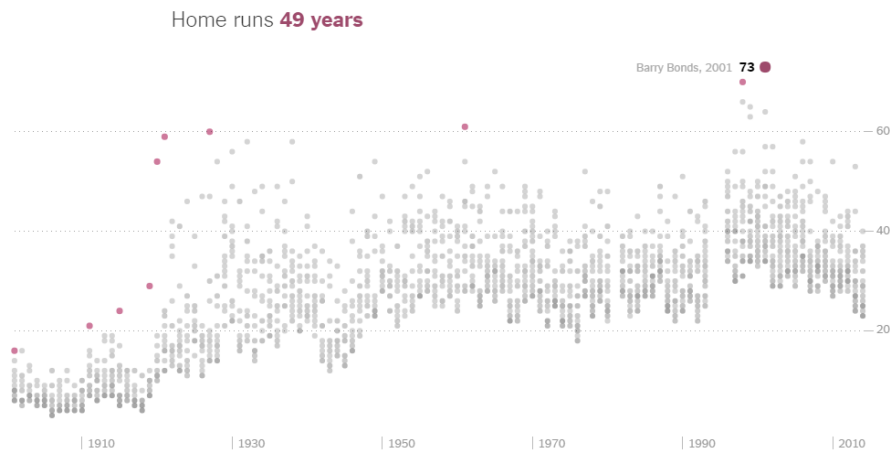
The process of taking a point of data of placing it visual form is called visual encoding of data.

Example #1: “How Many Years Until...”

By: Josh Katz, Matthew Bloch, Larry Buchanan, and Joe Ward

Published: New York Times, April 3, 2015

<https://www.nytimes.com/interactive/2015/04/03/sports/baseball/mlb-records.html>



Features of the Visualization

(A):

(B):

(C):

(D):

Categories of Data:

(1):

(2):

Categories of Visual Encodings:

(1):

(2):

(a):

(b):

(c):

(d):

(e):

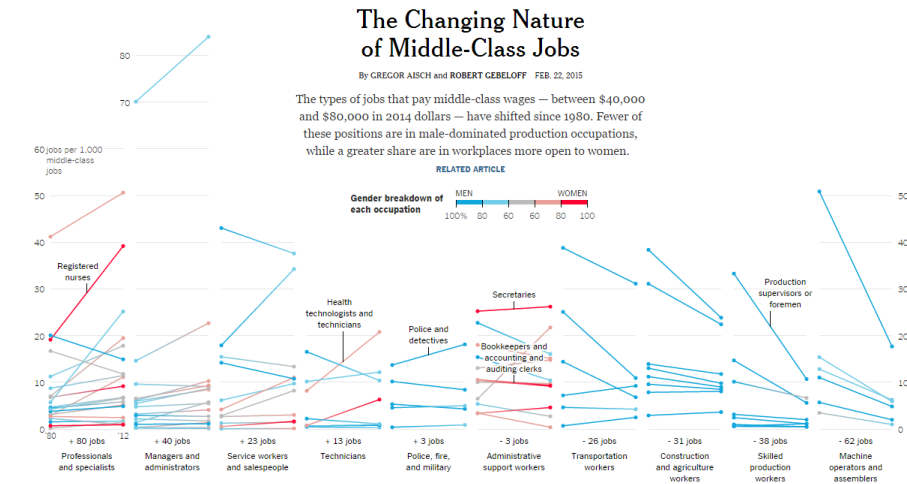
(f):

Example #2: “The Changing Nature of Middle Class Jobs”

By: Gregor Aisch and Robert Gebeloff

Published: New York Times, Feb 22, 2015

<https://www.nytimes.com/interactive/2015/02/23/business/economy/the-changing-nature-of-middle-class-jobs.html>



Features of the Visualization

(A):

(B):

(C):

(D):

(E):

Pre-attentive Features

Pre-attentive features of visualizations are visual encodings that are processed before a reader has completely processed the visualization.

Four categories of pre-attentive features:

(1):

(2):

(3):

(4):

Edward Tufte: “Lie Factor”:

$$\text{Lie Factor} = \frac{\text{size of effect shown in graphic}}{\text{size of effect in data}} \quad \text{size of effect} = \frac{|\text{second value} - \text{first value}|}{\text{first value}}$$

Example #3: The Rising Cost of College Tuition

Author: Illinois Student Assistance Commission

<http://www.collegeillinois.org/PlansAndPricing/CollegeTuitionCostandFees.html>

