

Online Course
**Data Visualization
 for Professionals**



Benjamin Bach

June 2020

<http://benjbach.me>

<https://datavis-online.github.io>

-- Not for external use --

Data Types: Ben Shneiderman

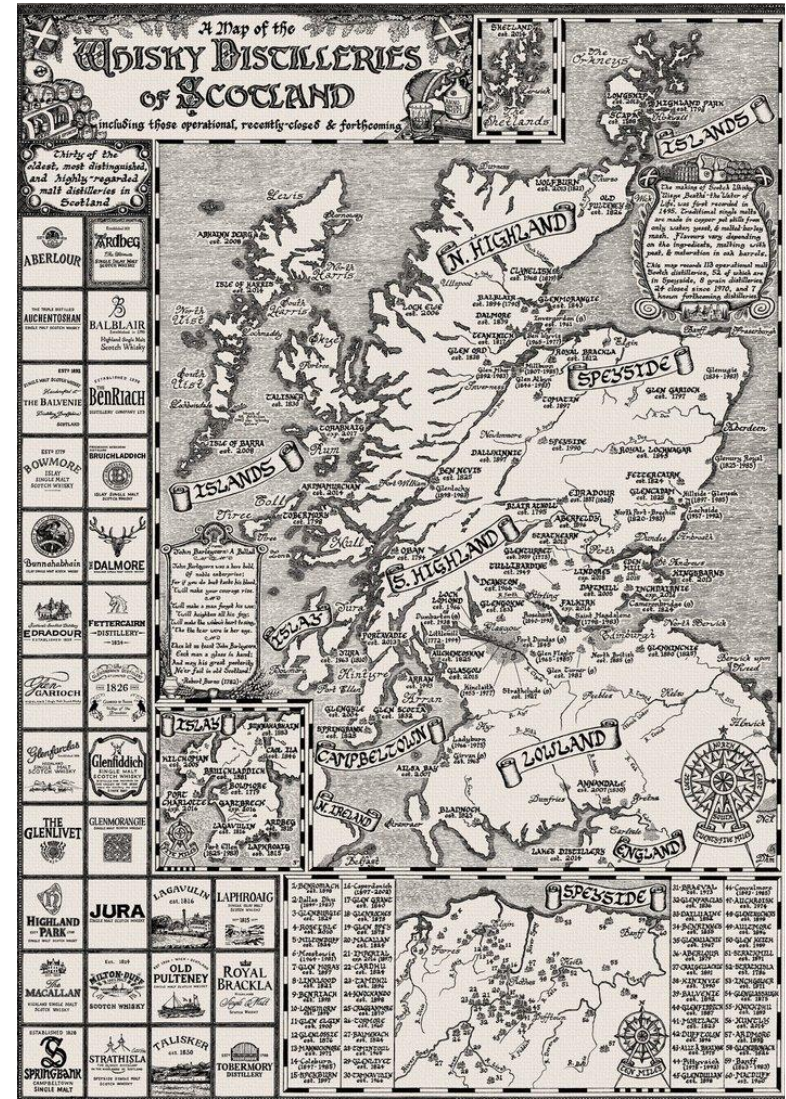
- **1-dimensional**
- 2-dimensional
- 3-dimensional
- Multidimensional
- Temporal
- Trees
- Networks

total_bill
16.99
10.34
21.01
23.68
24.59
25.29
8.77
26.88
15.04
14.78
10.27
35.26

Hr. Anton Joseph Herrenberger.
Hr. Lt. Johann Simon Klein.
Hr. Jacob Galler.
Hr. Lt. Joh. Franz Ehmann.
Hr. Lt. Joh. Friedrich Lauth.
Hr. Franz Placidus Claus.
Hr. Lt. Anton Lepicq.
Hr. Lt. Joh. Christian Treitlinger.
Hr. Lt. Jacob Friedrich Brackenhoffet.
Hr. Lt. Jacob Ludwig Albert.
Hr. Lt. Augustin Meinhard Anton
Lachaulle.
Hr. Joseph Herrmann Duelly.

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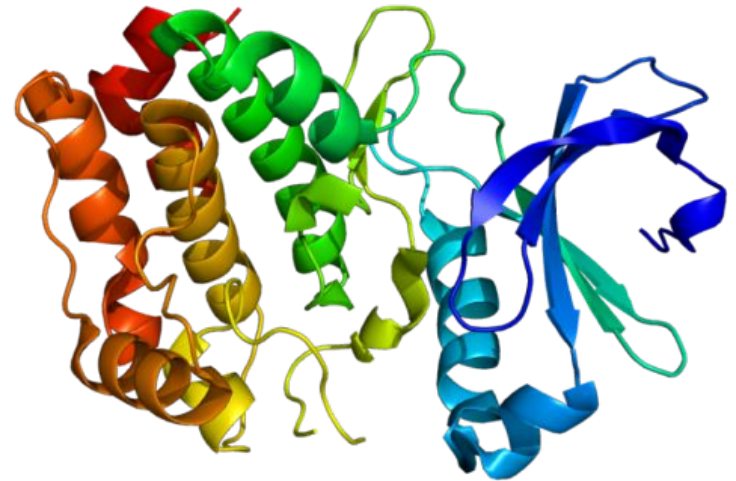
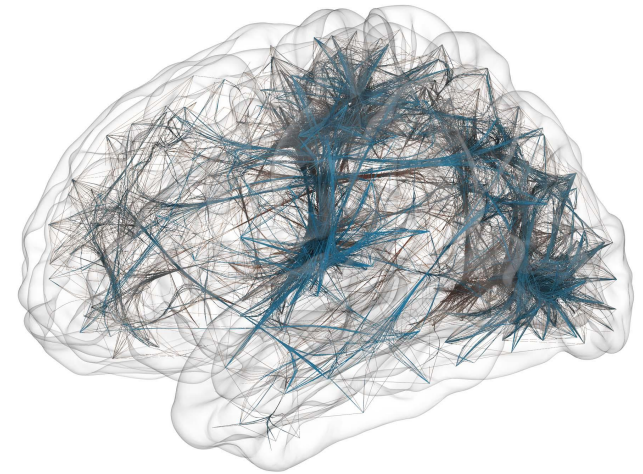
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Shneiderman, Ben. "The eyes have it: A task by data type taxonomy for information visualizations." *Proceedings 1996 IEEE symposium on visual languages*. IEEE, 1996.

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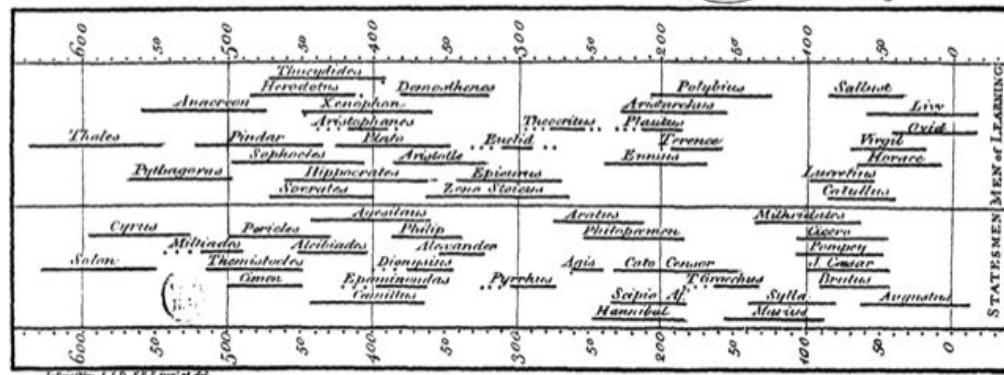
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total_bill	tip	sex	smoker	day
16.99	1.01	Female	No	Sun
10.34	1.66	Male	No	Sun
21.01	3.5	Male	No	Sun
23.68	3.31	Male	No	Sun
24.59	3.61	Female	Yes	Sun
25.29	4.71	Male	No	Sun
8.77	2	Male	No	Sun
26.88	3.12	Male	No	Sun
15.04	1.96	Male	Yes	Sun
14.78	3.23	Male	Yes	Sun
10.27	1.71	Male	Yes	Sun
35.26	5	Female	No	Sun

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A Specimen of a Chart of Biography.



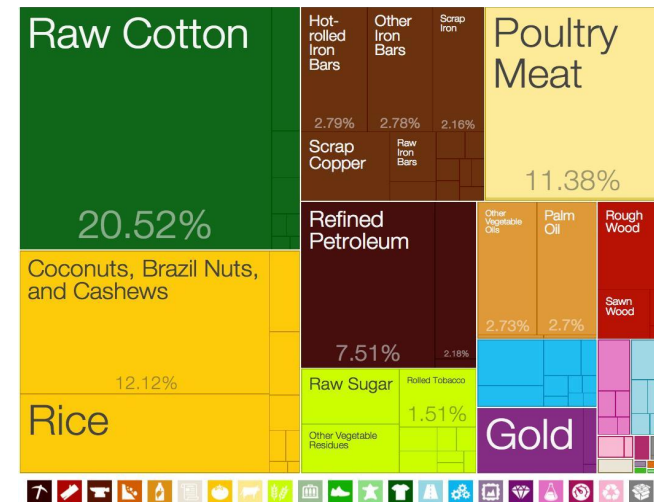
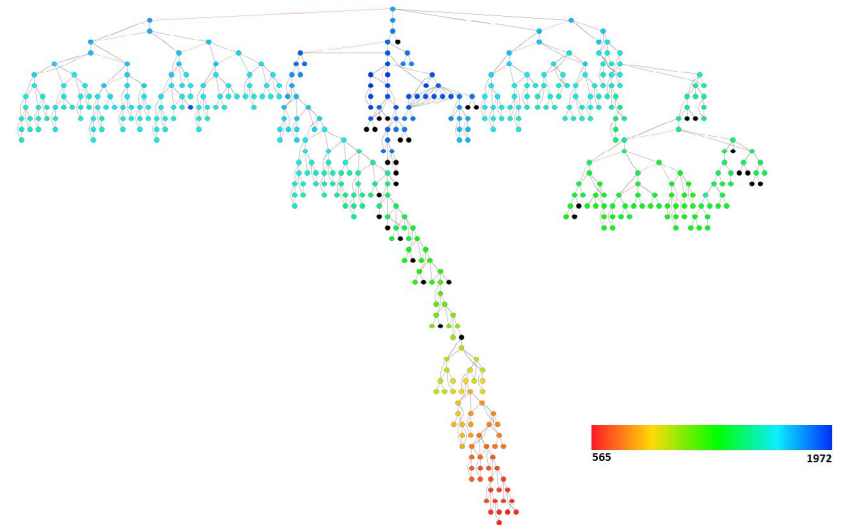
*CHART of all the IMPORTS and EXPORTS to and from ENGLAND
From the Year 1700 to 1800. by R. Playfair*



*The Division at the Bottom, represents YEARS, & those on the Right hand, Millions of POUNDS
Published in the Edinburgh Review, Vol. 1, Aug. 1791*

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- Temporal
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- **Networks**

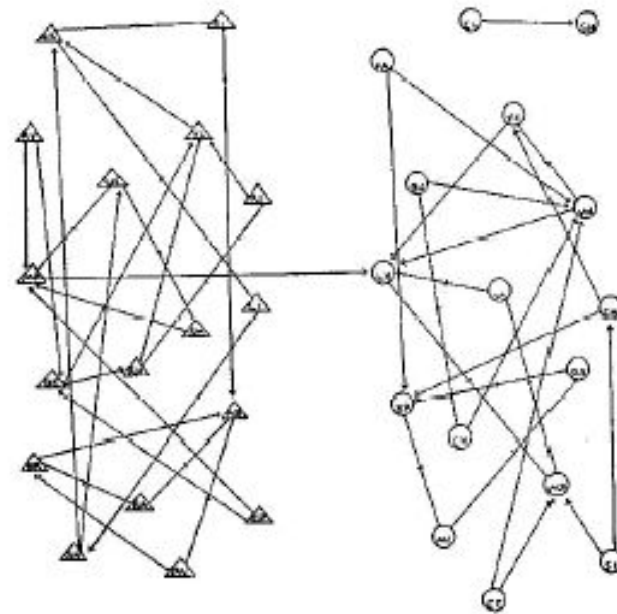


Figure 1. An Attraction Network in a Fourth Grade Class (from Moreno [19], p. 38).