

Data Visualization

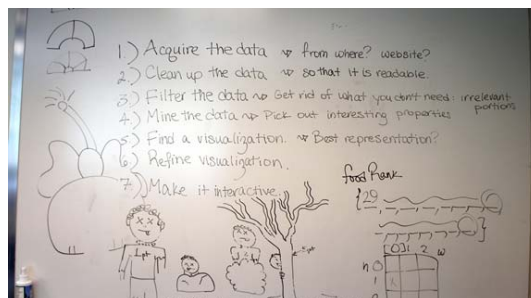
- Graphical representation of information
- Chars
- Plots
- Maps
- Time series

Data Visualization Process

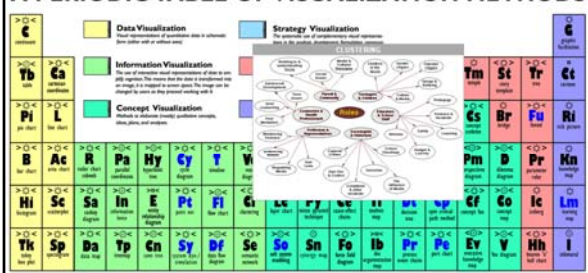
- Acquire - Obtain the data from some source
- Parse - Give the data some structure, clean up
- Filter - Remove all but the data of interest
- Mine - Use the data to derive interesting properties
 - Statistical methods
 - Pattern recognition
 - Numerical analysis, etc

Data Visualization Process

- Represent - Chose a visual representation
- Refine – Improve to make it more visually engaging
- Interact - Make it interactive
 - manipulating the data
 - controlling visual features, etc.



A PERIODIC TABLE OF VISUALIZATION METHODS



http://www.visual-literacy.org/periodic_table/periodic_table.html

Jer Thorp, Artist/Educator - NYU

225 "random" numbers chosen and tweeted by 225 people

| | | | | | | | | | | | |
|----|----|----|----|----|----|----|----|----|----|----|----|
| 19 | 42 | 42 | 87 | 81 | 99 | 33 | 98 | 61 | 47 | 24 | 66 |
| 69 | 23 | 67 | 67 | 57 | 71 | 5 | 79 | 57 | 46 | 93 | 54 |
| 43 | 32 | 18 | 42 | 77 | 37 | 37 | 6 | 93 | 55 | 55 | 77 |
| 15 | 88 | 42 | 55 | 77 | 42 | 93 | 3 | 17 | 26 | 64 | 65 |
| 23 | 21 | 9 | 7 | 23 | 17 | 14 | 42 | 45 | 27 | 97 | 83 |
| 89 | 4 | 4 | 26 | 6 | 39 | 97 | 72 | 35 | 6 | 66 | |
| 19 | 2 | 72 | 81 | 37 | 47 | 66 | 17 | 12 | 52 | 74 | |
| 54 | 61 | 43 | 19 | 57 | 17 | 77 | 47 | 26 | 72 | 64 | |
| 69 | 99 | 64 | 88 | 67 | 1 | 36 | 2 | 60 | 27 | 73 | |
| 4 | 43 | 97 | 67 | 42 | 37 | 27 | 1 | 75 | 15 | 17 | |
| 13 | 59 | 32 | 78 | 40 | 15 | 64 | 77 | 11 | 1 | 17 | |
| 37 | 13 | 7 | 26 | 57 | 25 | 12 | 69 | 8 | 84 | 23 | |
| 66 | 42 | 14 | 33 | 17 | 97 | 25 | 57 | 1 | 81 | 97 | |
| 8 | 18 | 78 | 12 | 95 | 37 | 84 | 86 | 41 | 56 | 73 | |
| 78 | 60 | 21 | 39 | 28 | 17 | 83 | 69 | 12 | 74 | 37 | |
| 67 | 19 | 19 | 88 | 96 | 69 | 29 | 74 | 53 | 33 | 72 | |
| 32 | 81 | 72 | 72 | 73 | 39 | 52 | 97 | 77 | 77 | 41 | |
| 76 | 17 | 69 | 83 | 67 | 64 | 25 | 35 | 42 | 4 | 76 | |
| 13 | 36 | 2 | 37 | 52 | 47 | 43 | 25 | 66 | 7 | 6 | |
| 87 | 94 | 16 | 28 | 20 | 79 | 23 | 21 | 55 | 66 | 87 | |

<http://blog.bjprnt.com/blog/bjprnt/your-random-numbers-getting-started-with-processing-and-data-visualization>