

## SINGAPORE

@wwcodesingapore

singapore@womenwhocode.com

[www.womenwhocode.com/singapore](http://www.womenwhocode.com/singapore)

[facebook.com/groups/wwcodesingapore](https://facebook.com/groups/wwcodesingapore)

# OUR MISSION

Inspiring women to  
excel in technology  
careers.

WOMEN WHO  
**CODE**



# OUR GOALS

To Provide women with an **avenue** into tech

To Empower women with the **skills** they need for professional advancement.

To Build environments where **networking** and **mentorship** are valued.

To Create a global community to **support** women in tech wherever they live.

# “DEAR WOMEN, WE NEED YOU”-The Tech Industry

## What We Do ...

Organise technical events

Code Review (Newsletter)

#ApplaudHer

Scholarships

Conference Tickets

Job board



Thank you to our HOST



SPgroup

# Data Visualisation

Yue Lin CHOONG

# Why Data Visualisation

- A picture is worth a thousand words

Communicate data clearly and effectively with pictures, graphs or charts

Anything that help people understand the significance of data

Enable decision makers to see analytics

Allow people to grasp difficult concepts or identify new patterns

To find insights in presentation and outcome of data analytics



# Data Visualisation Taxonomy

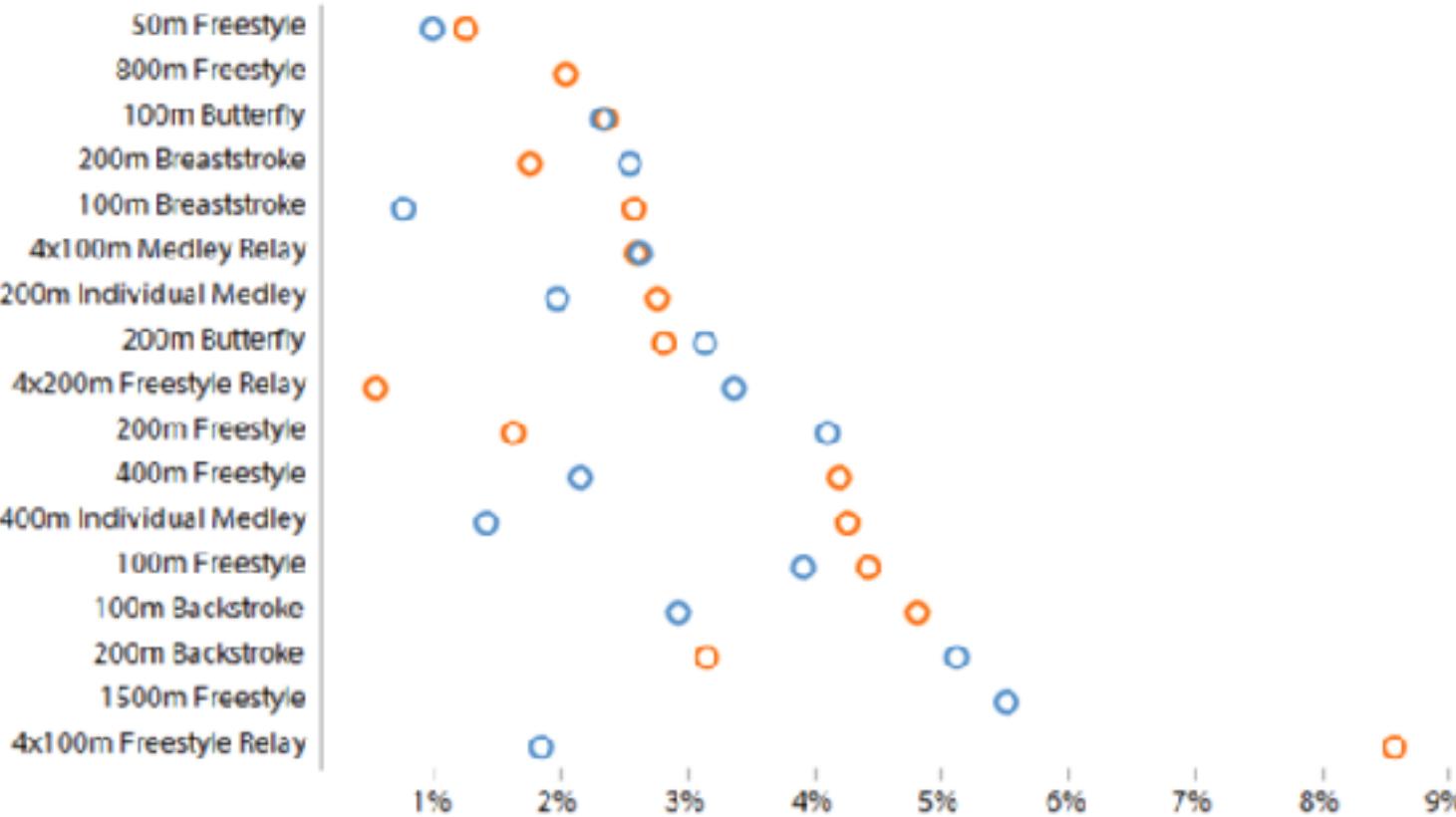
# Dot plot

## Data:

Categorical,  
quantitative

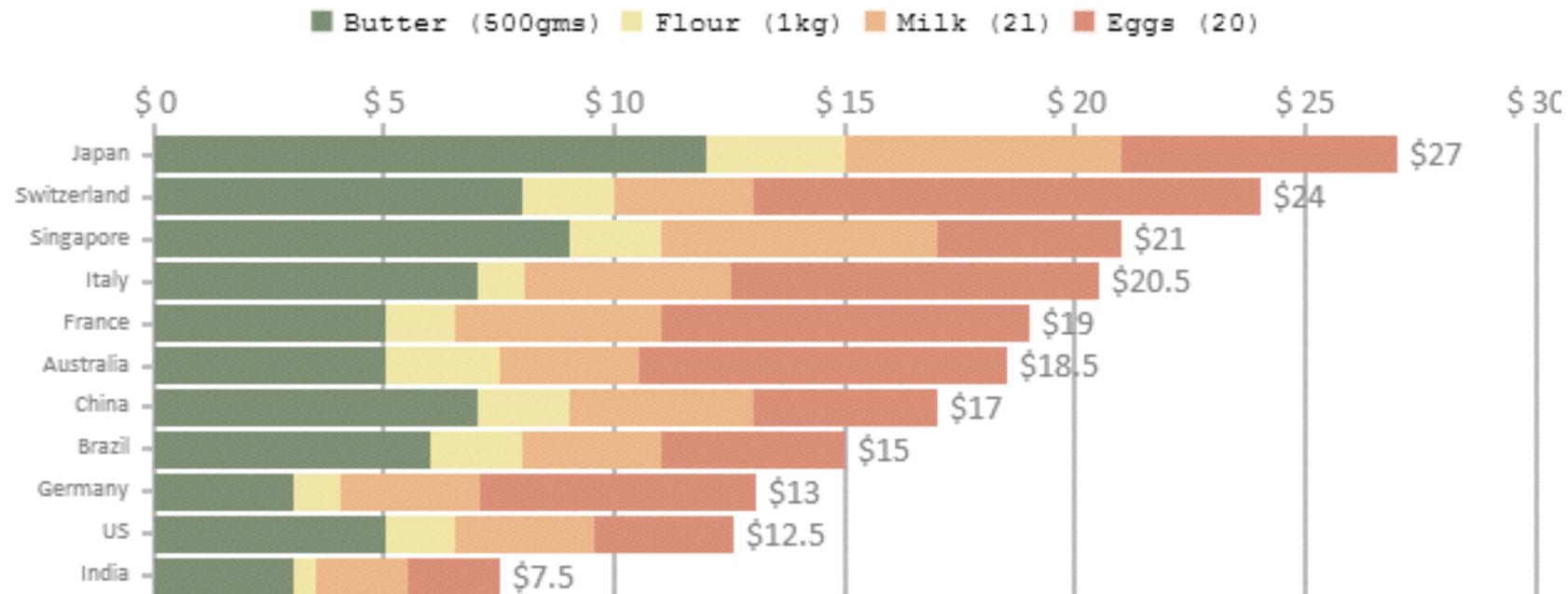
## Visual:

Position,  
colour-hue,  
symbol



## Bar charts (or Column charts) - stacked

### Cost Of Pancake Ingredients, 2011



# Floating chart (or Gantt chart)

## Data:

Categorical-nominal,  
quantitative

## Visual:

Position, length

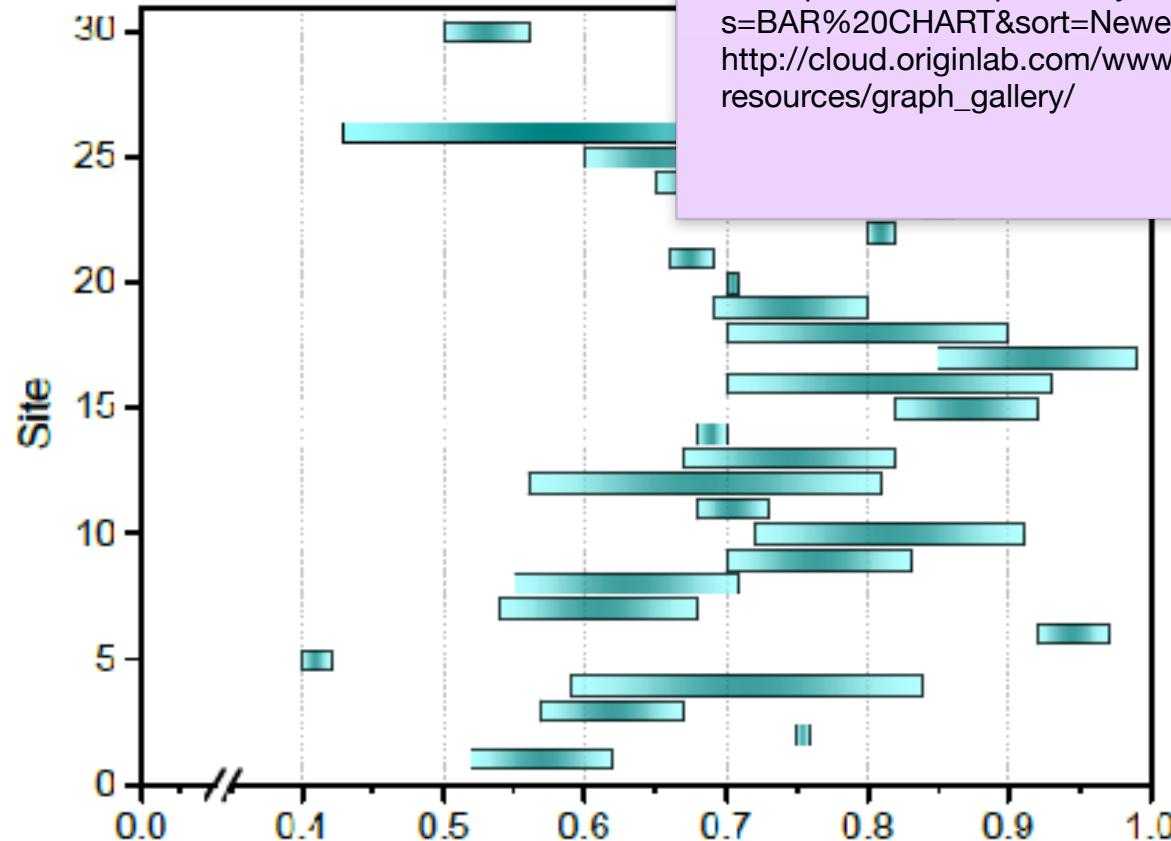
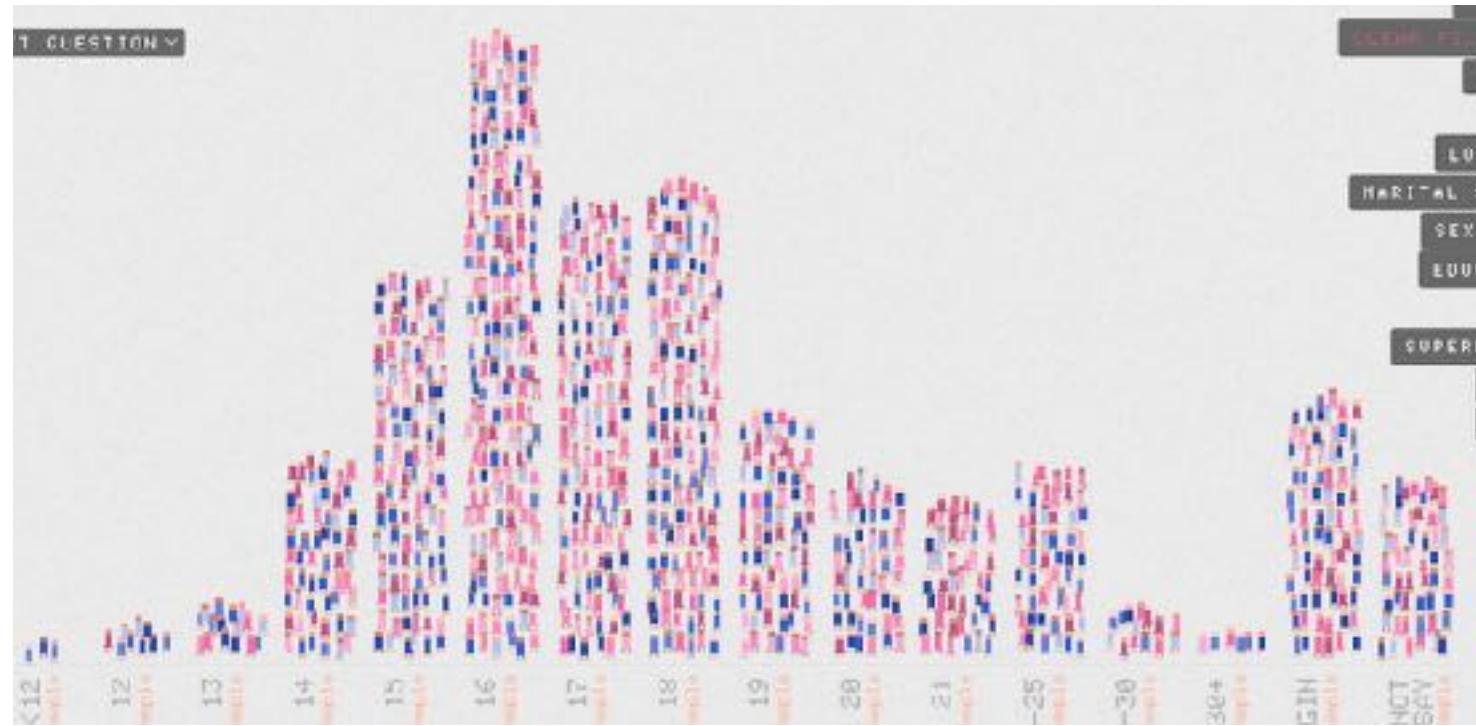


image from <http://www.originlab.com/www/products/GraphGallery.aspx?s=BAR%20CHART&sort=Newest>  
[http://cloud.originlab.com/www/resources/graph\\_gallery/](http://cloud.originlab.com/www/resources/graph_gallery/)

# Pixelated bar chart



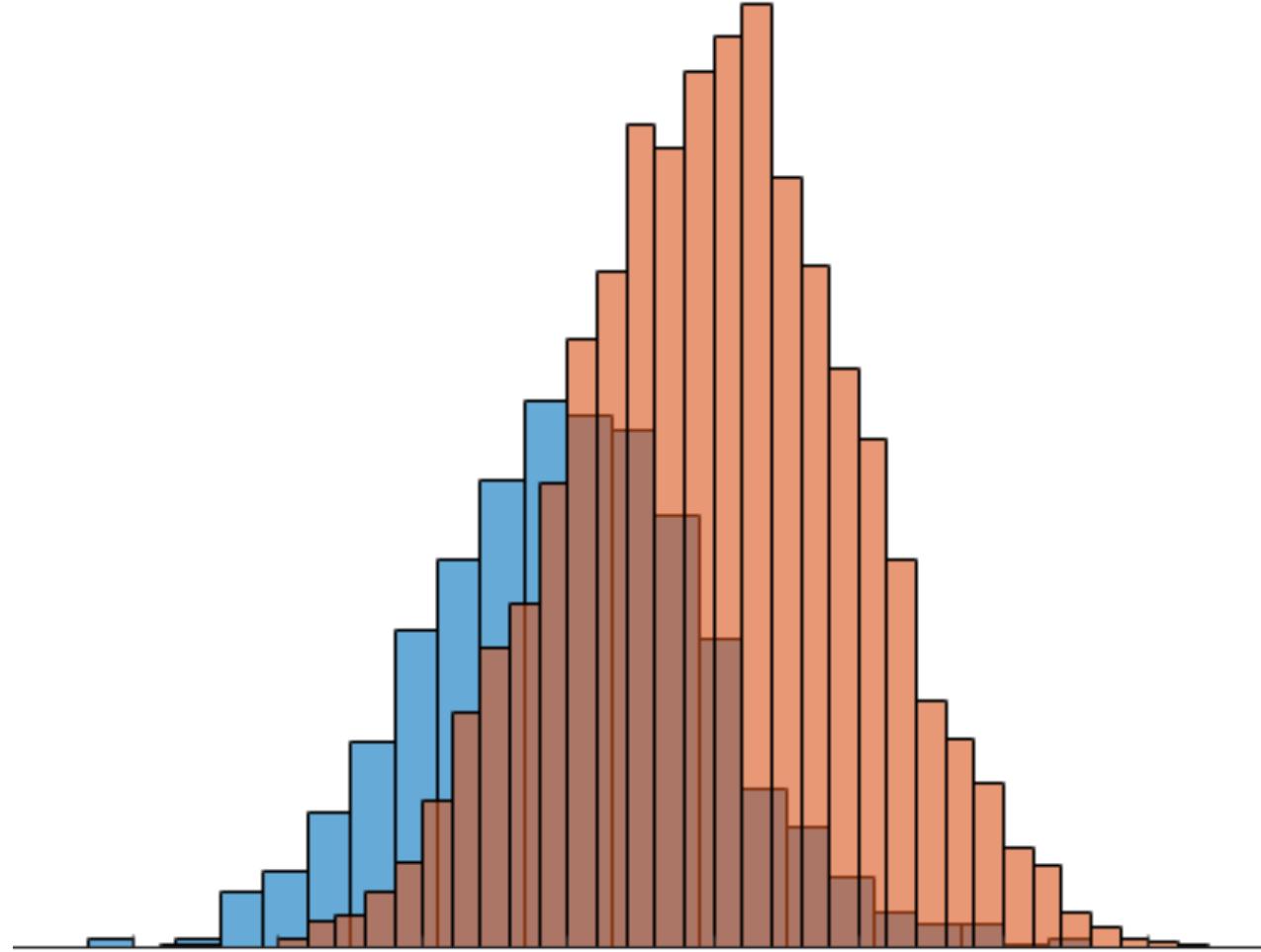
# Histogram

## Data:

Quantitative-interval,  
quantitative-ratio

## Visual:

Height, width



# Slope graph

2010/2011

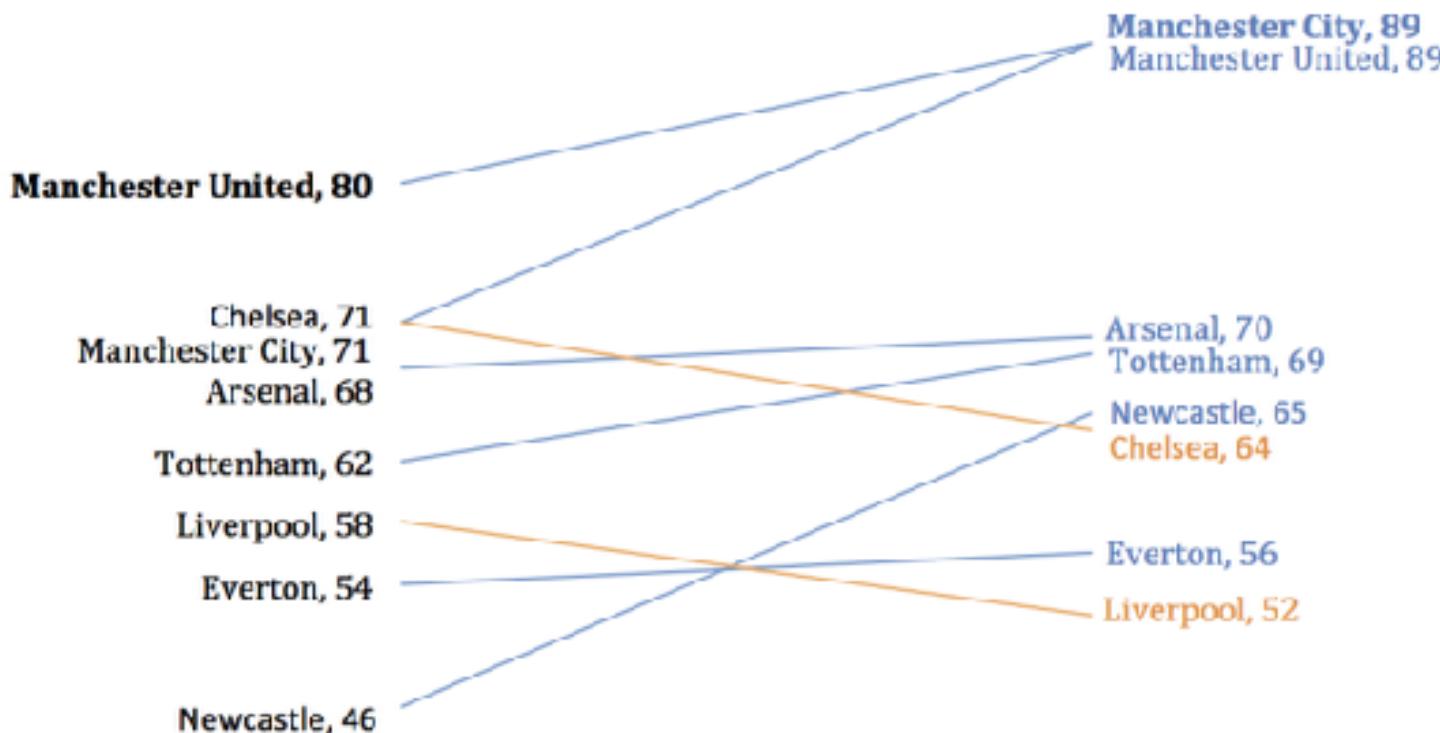
2011/2012

## Data:

Categorical,  
quantitative

## Visual:

Position,  
colour-hue,  
connection



# Radial chart

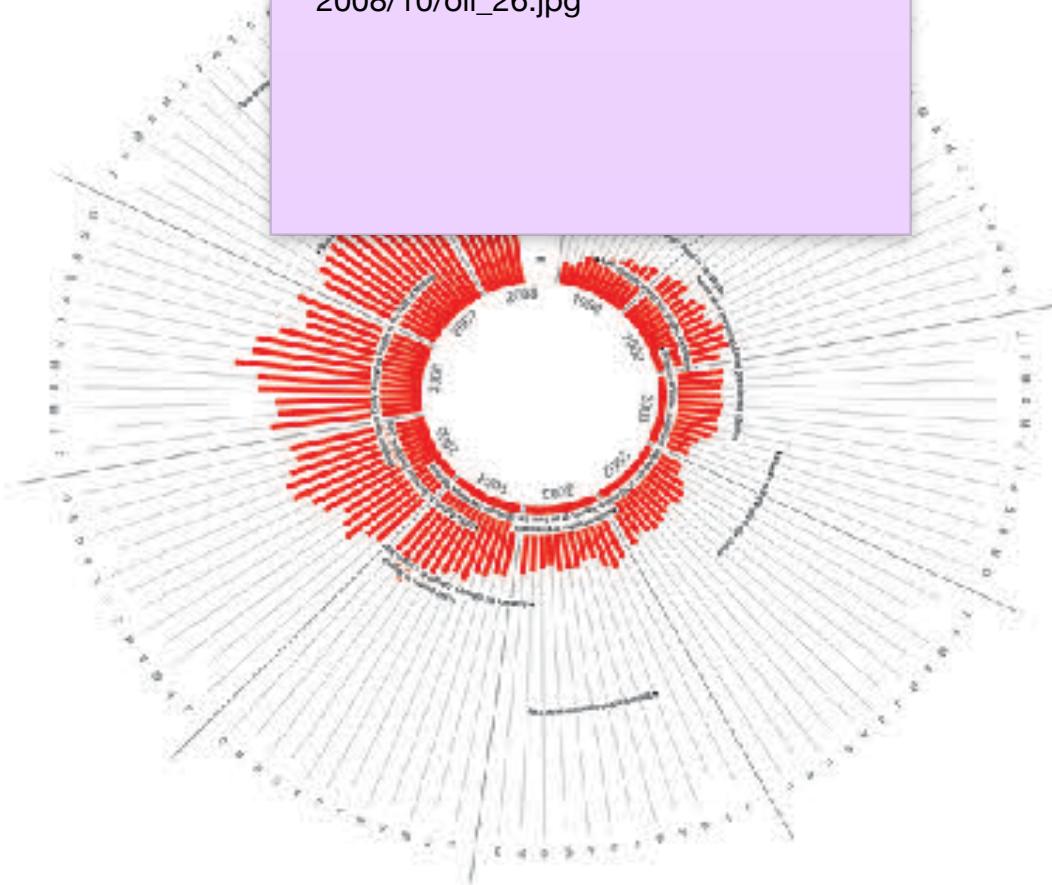
## Data:

Categorical,  
quantitative

## Visual:

Position,  
length

[https://whatype.files.wordpress.com/2008/10/oil\\_26.jpg](https://whatype.files.wordpress.com/2008/10/oil_26.jpg)





# Glyph chart

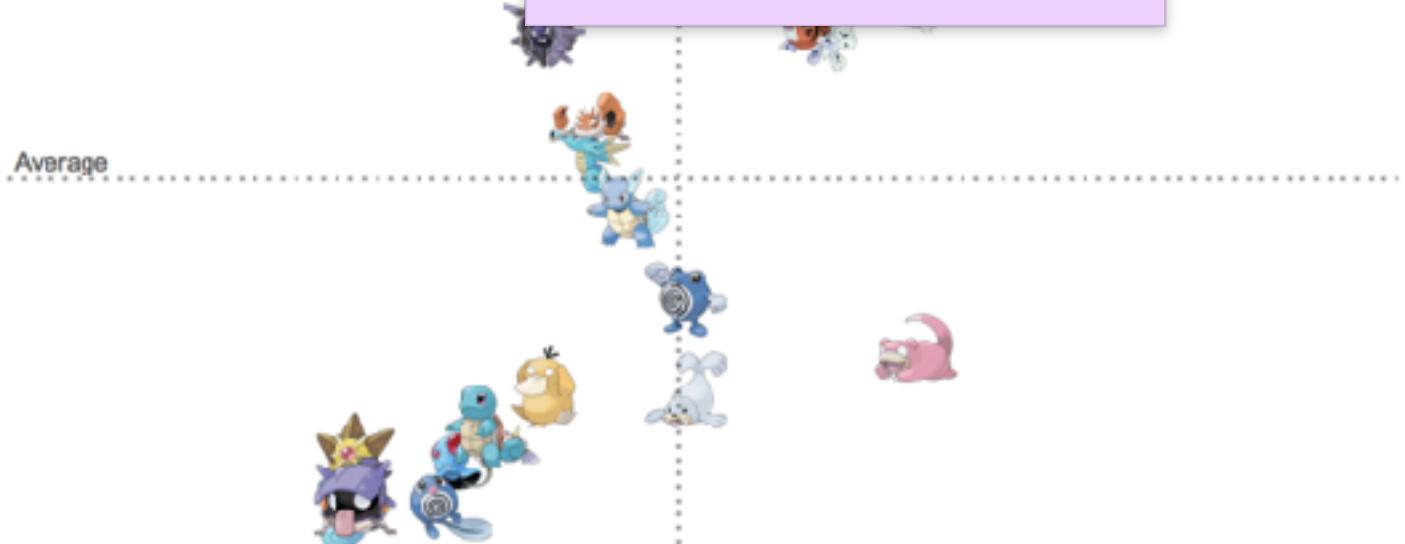
## Data:

Categorical,  
quantitative

## Visual:

Position,  
symbol

[https://vizweekly.wordpress.com/  
2016/08/28/pokemongo-attackers-vs-  
defenders/](https://vizweekly.wordpress.com/2016/08/28/pokemongo-attackers-vs-defenders/)



AUGUST 28, 2016 • Posted in VISUAL GOODNESS



# Sankey diagram

## Data:

Categorical,  
quantitative-ratio

## Visual:

Area,  
colour-hue



# Area size chart

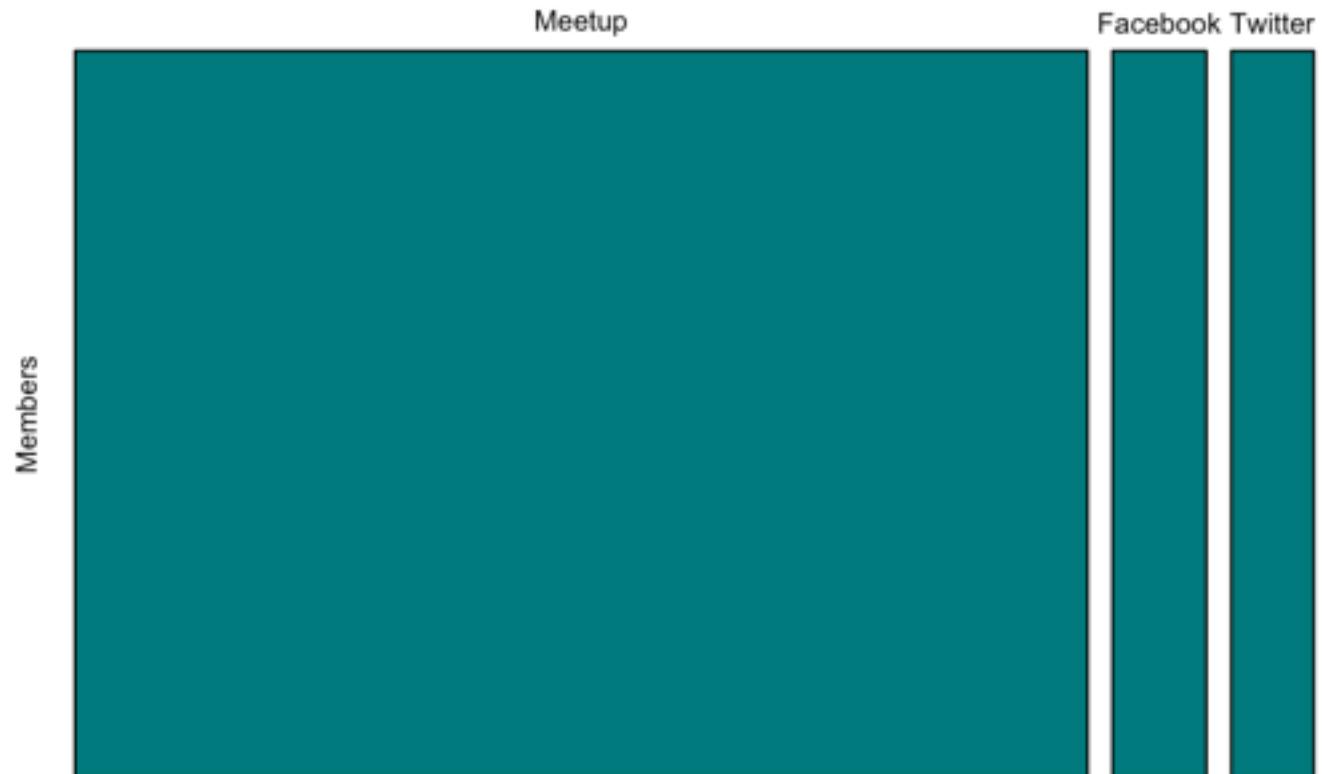
## WWCodeSG Members

### Data:

Categorical,  
quantitative-ratio

### Visual:

Area

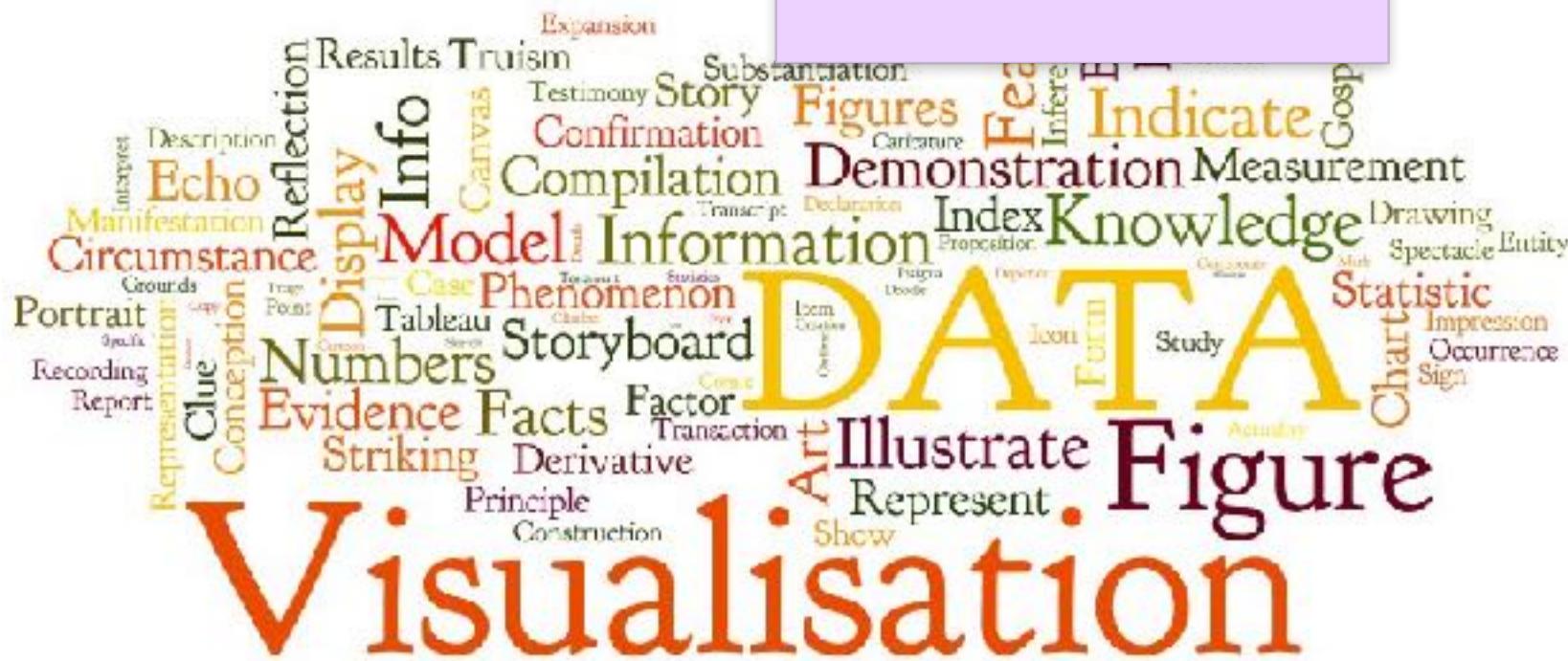


# Small multiples (or trellis chart)

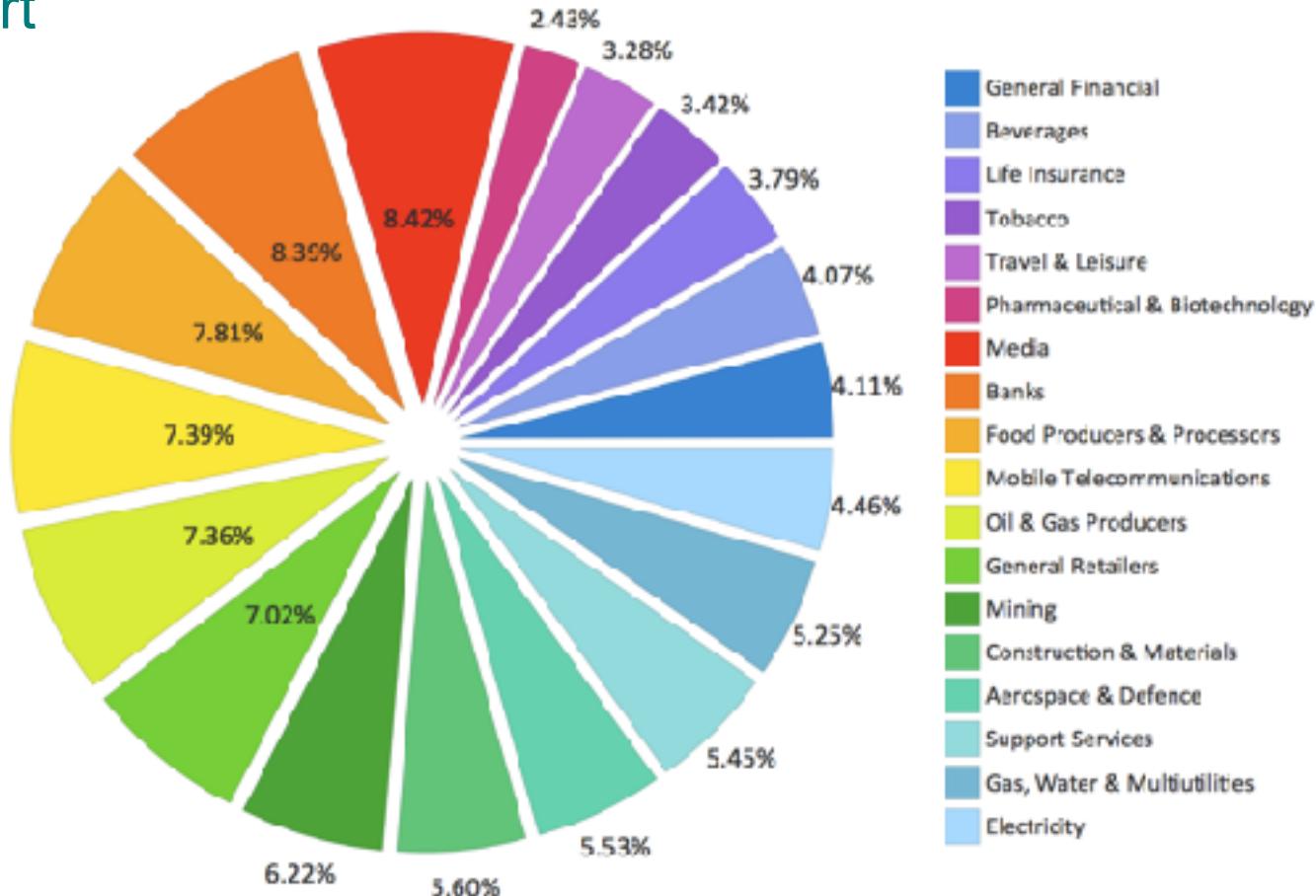


# Word cloud

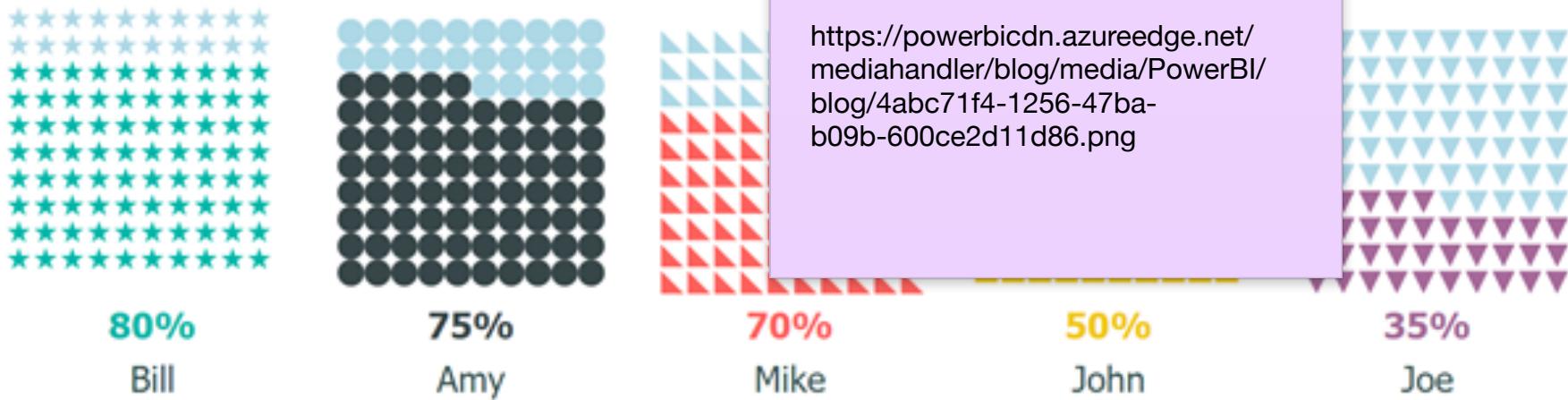
<http://www.bigdatatraining.in/wp-content/uploads/2014/08/data-visualisation.jpg>



# Pie chart



# Square pie (or unit chart or waffle chart)



# Tree map

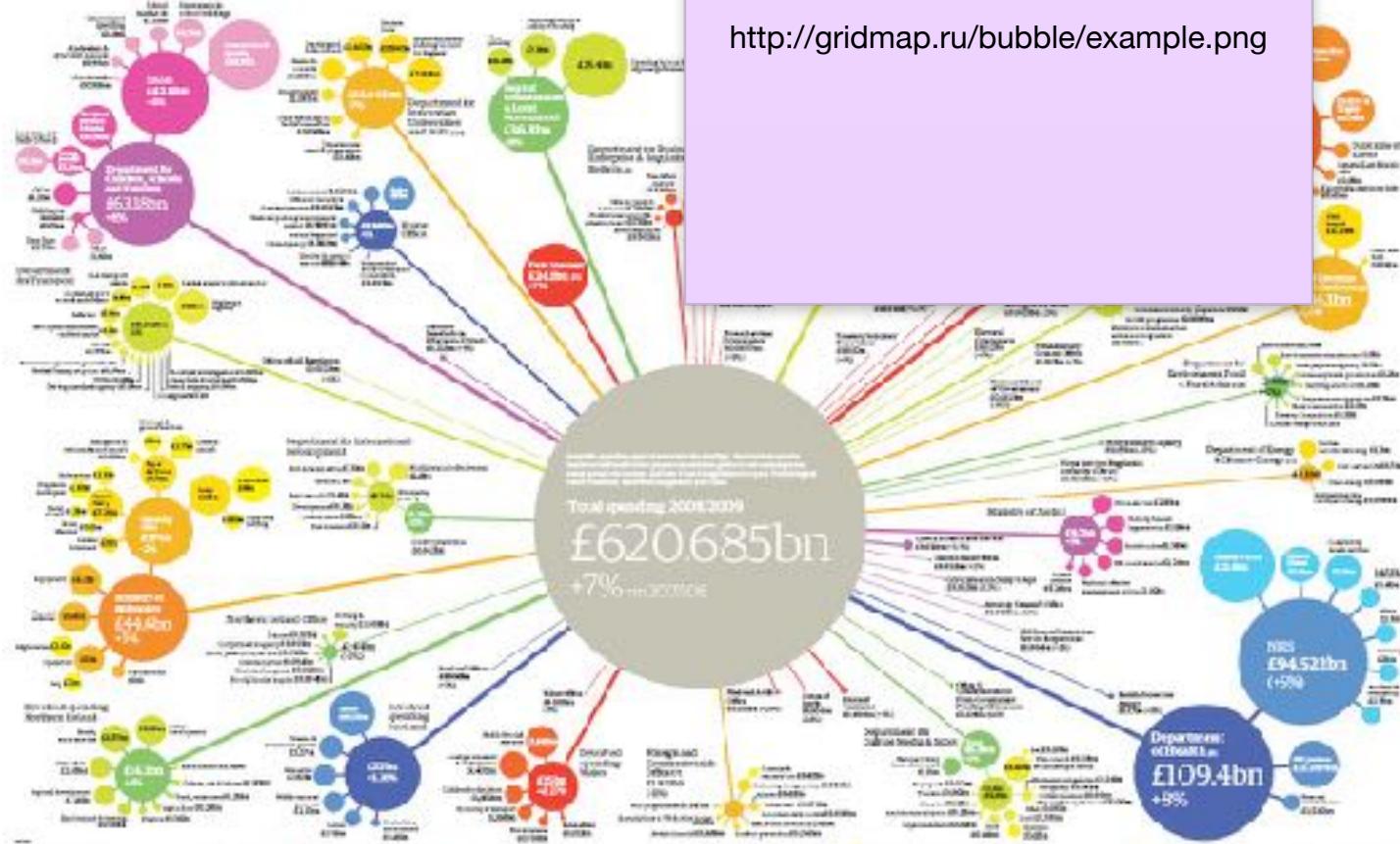


# Circle packing diagram



<https://vizweekly.wordpress.com/2015/03/26/my-collection-of-data-visualisation-tools-a-growing-list/>

# Bubble Hierarchy



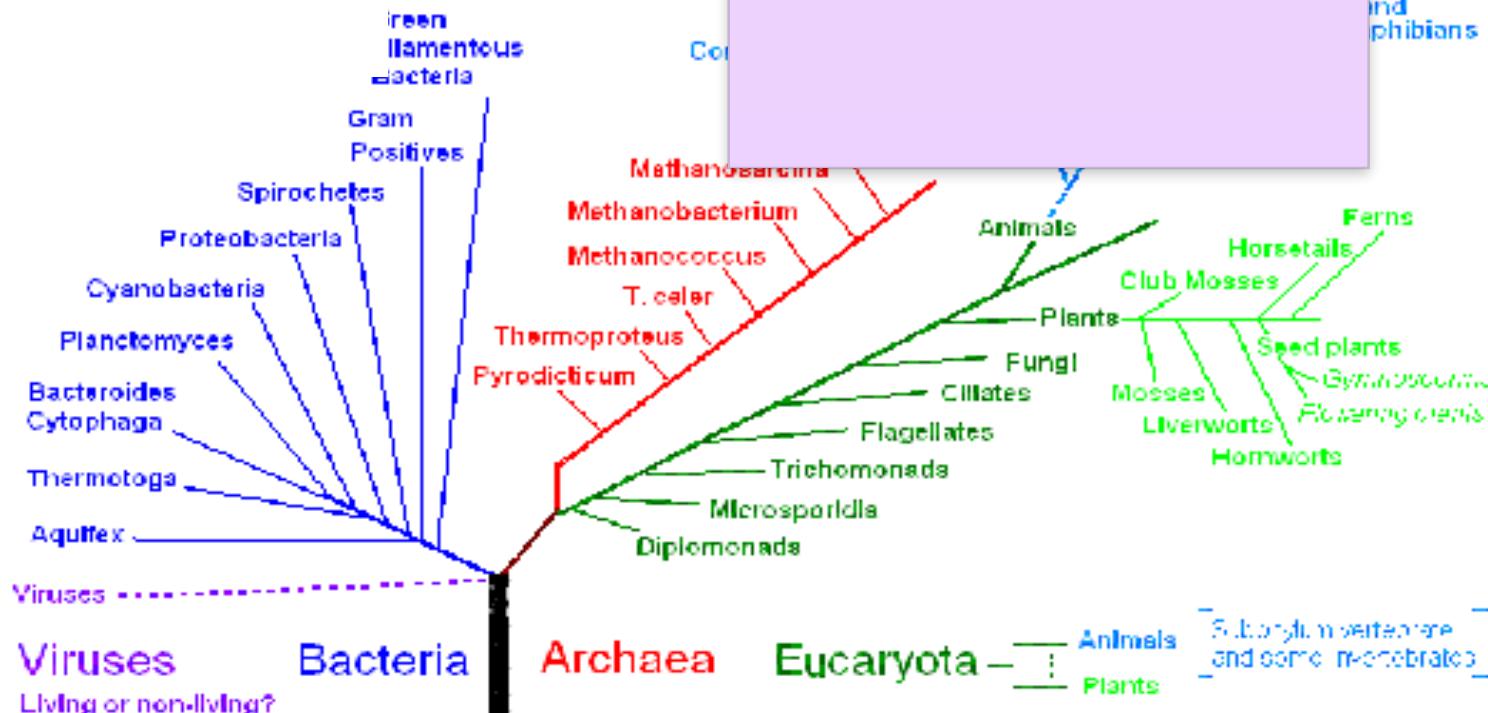
<http://gridmap.ru/bubble/example.png>

# Tree hierarchy

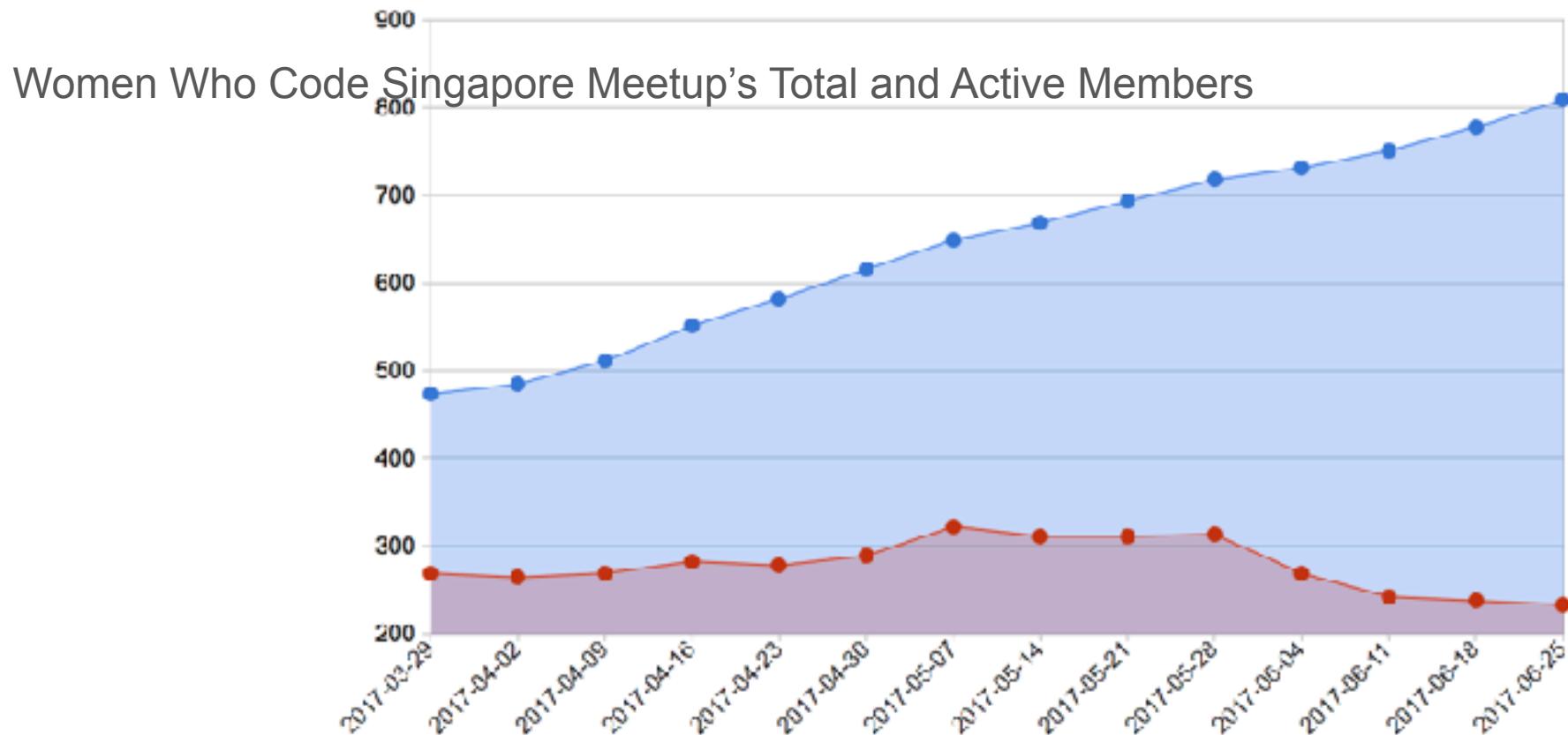
Sq.  
S  
Wo  
Col

<http://understandingcontext.com/wp-content/uploads/2014/03/Tree-of-Life.png>

Ind  
phibians



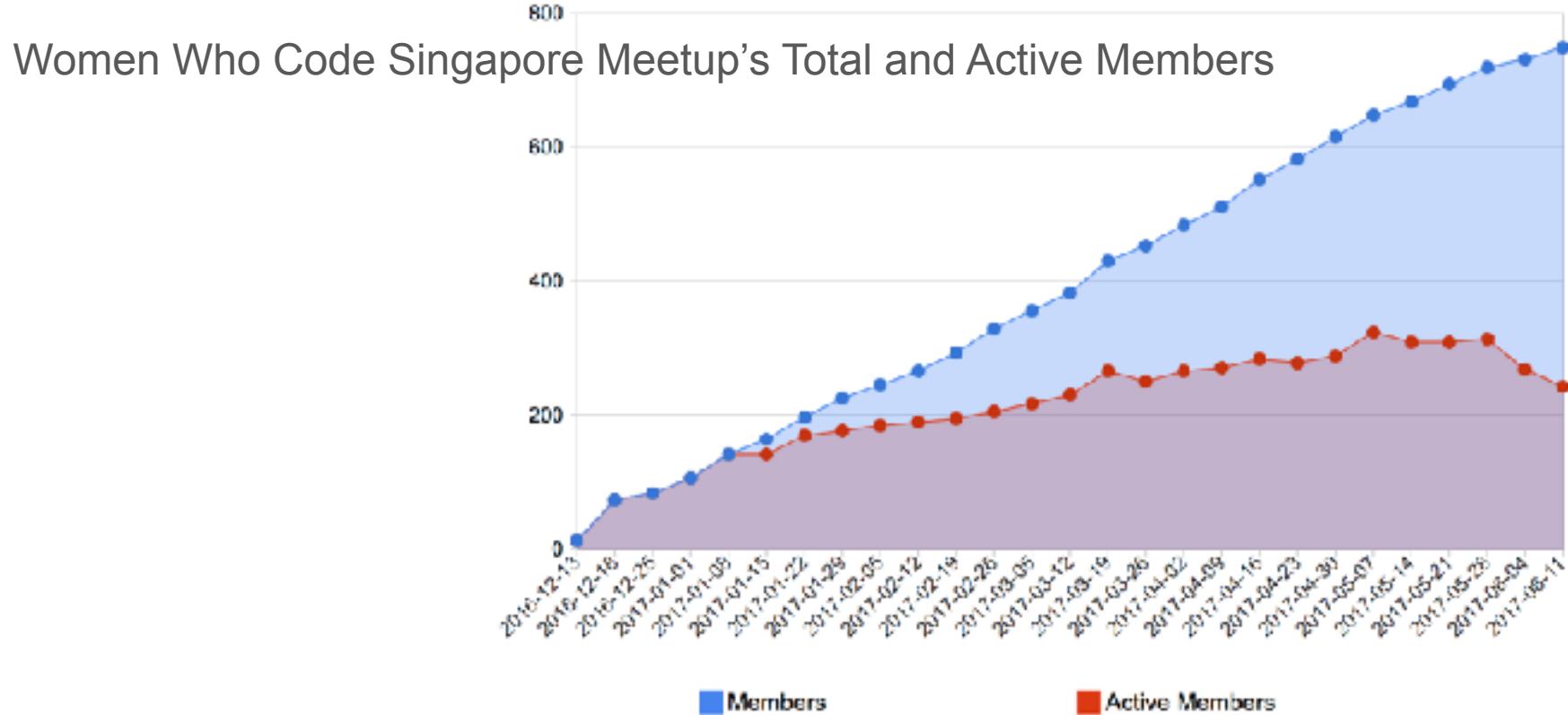
## Line chart



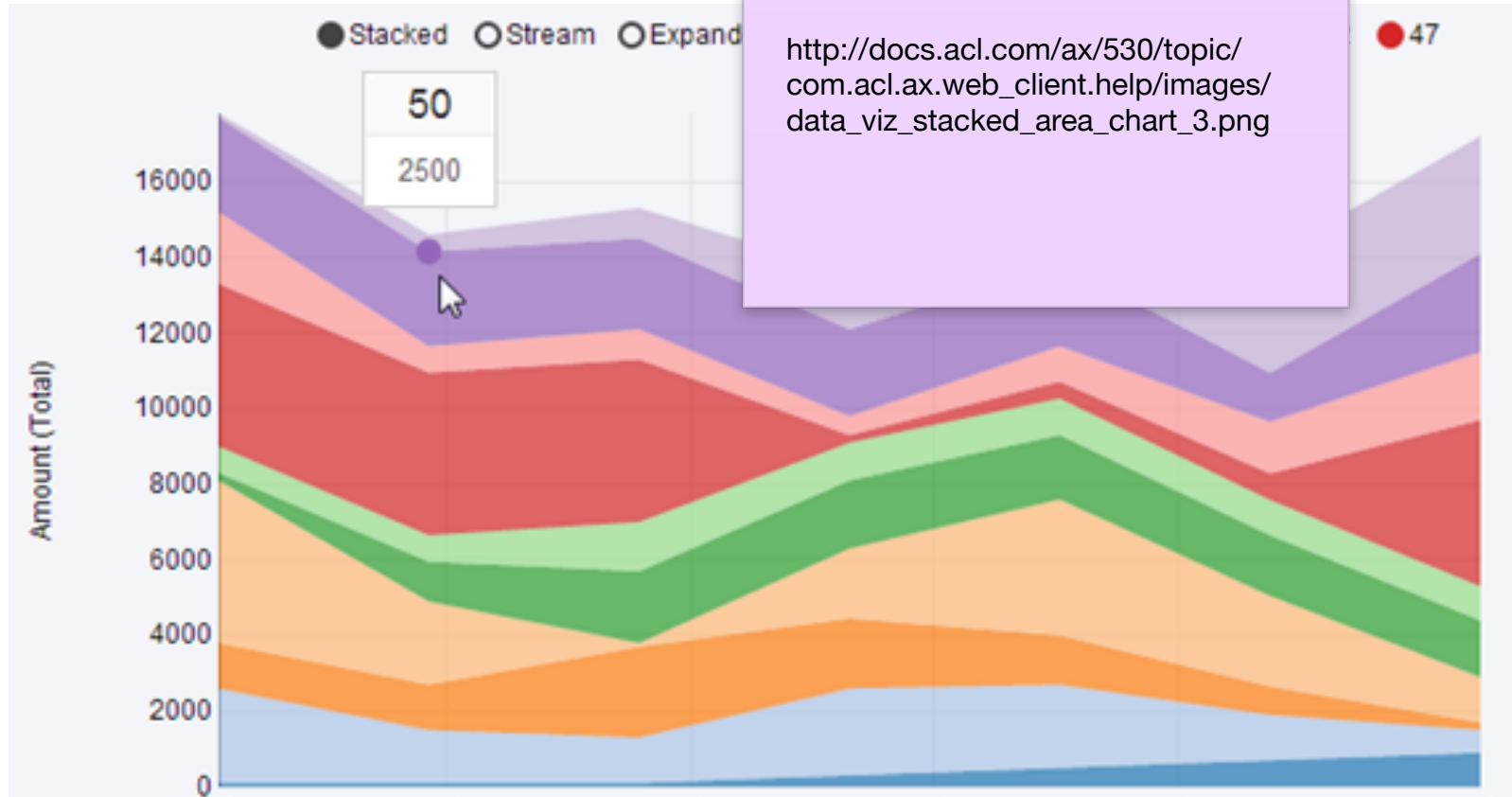
## Sparklines



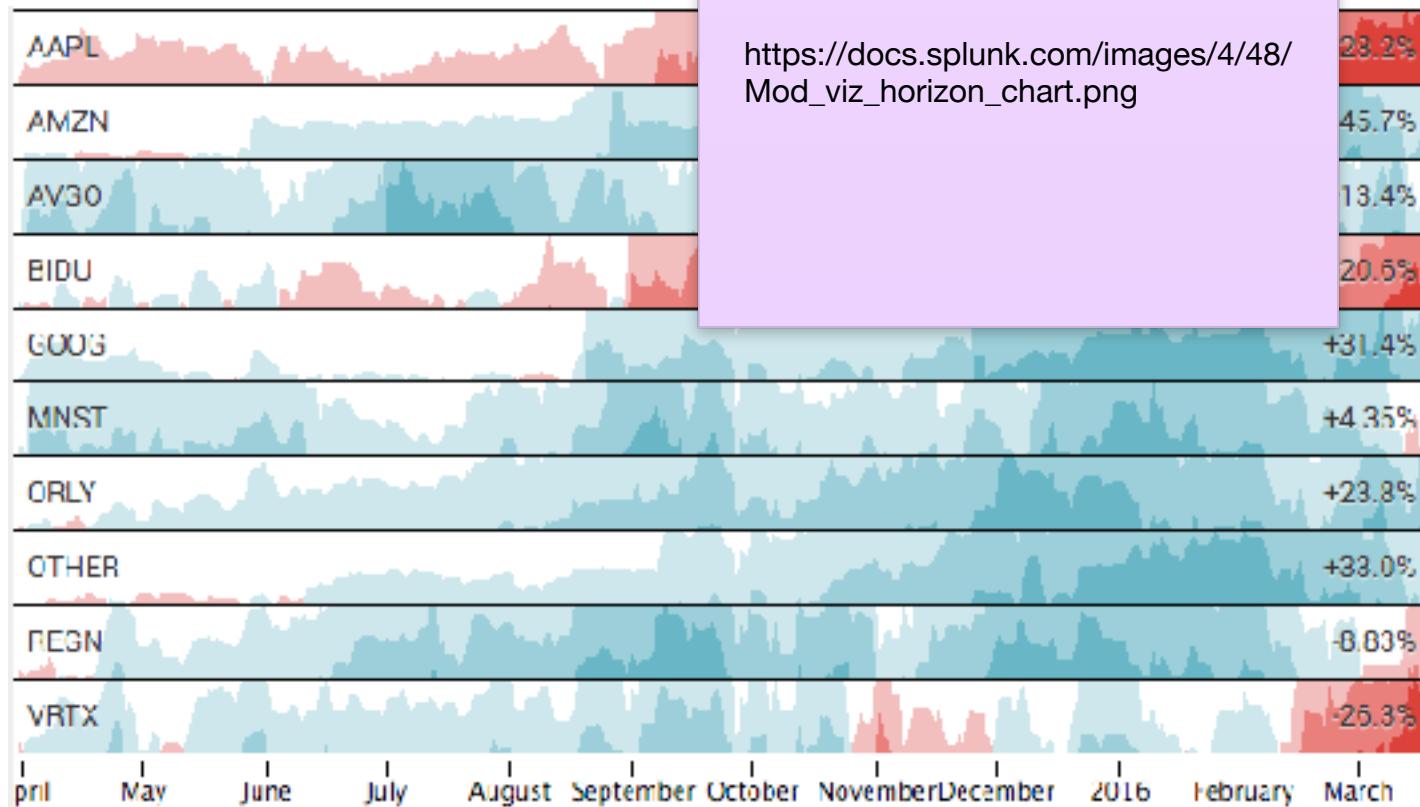
## Area chart



## Area chart - stacked

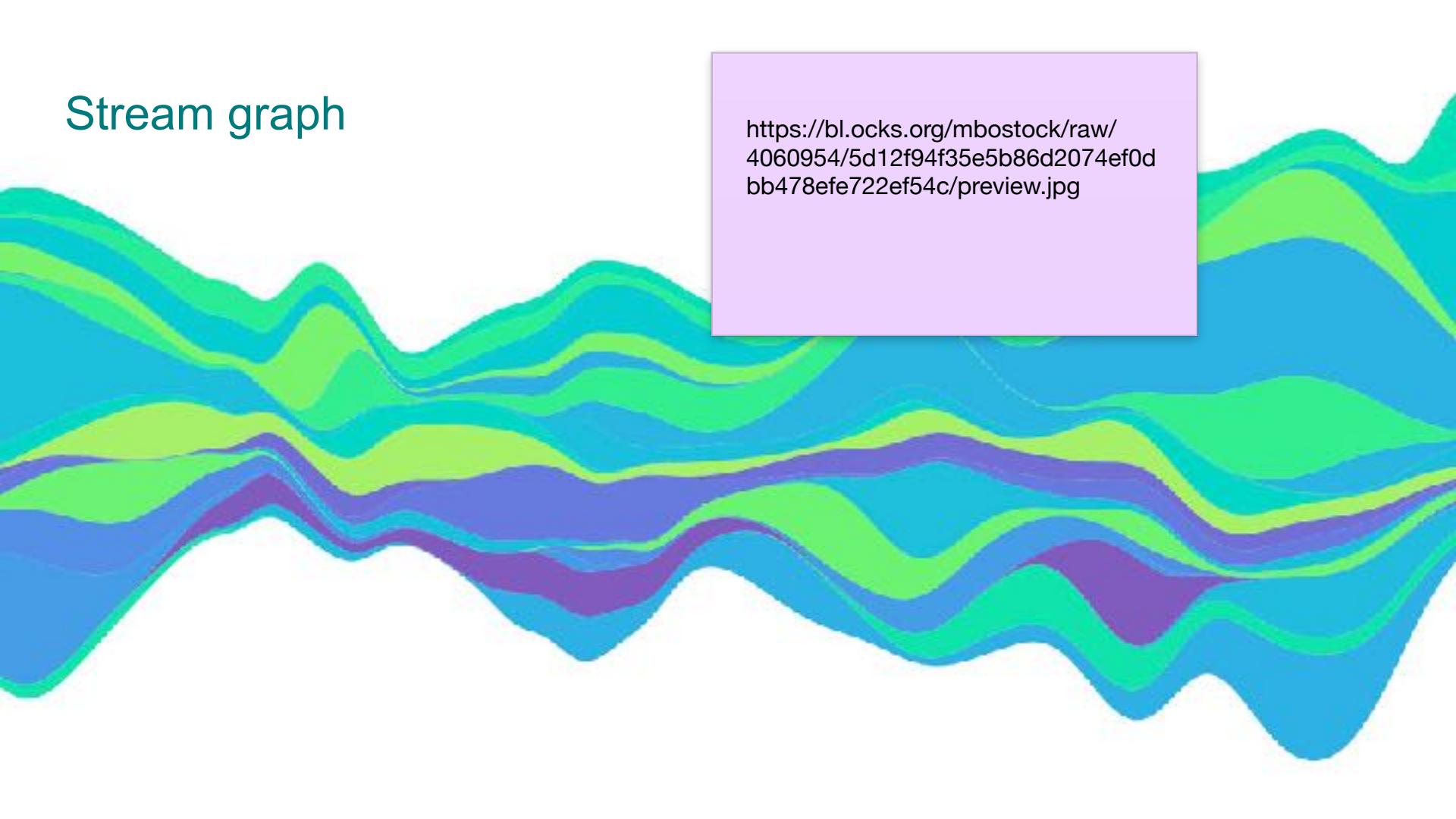


# Horizon chart



[https://docs.splunk.com/images/4/48/Mod\\_viz\\_horizon\\_chart.png](https://docs.splunk.com/images/4/48/Mod_viz_horizon_chart.png)

# Stream graph



A stream graph visualization showing multiple colored flows (blue, green, purple) on a white background. The flows are represented by stacked areas that move across the frame, creating a sense of dynamic data flow.

<https://bl.ocks.org/mbostock/raw/4060954/5d12f94f35e5b86d2074ef0dbb478efe722ef54c/preview.jpg>

# Candlestick chart (or box and whiskers plot, OHLC chart)



# Barcode chart

## Data:

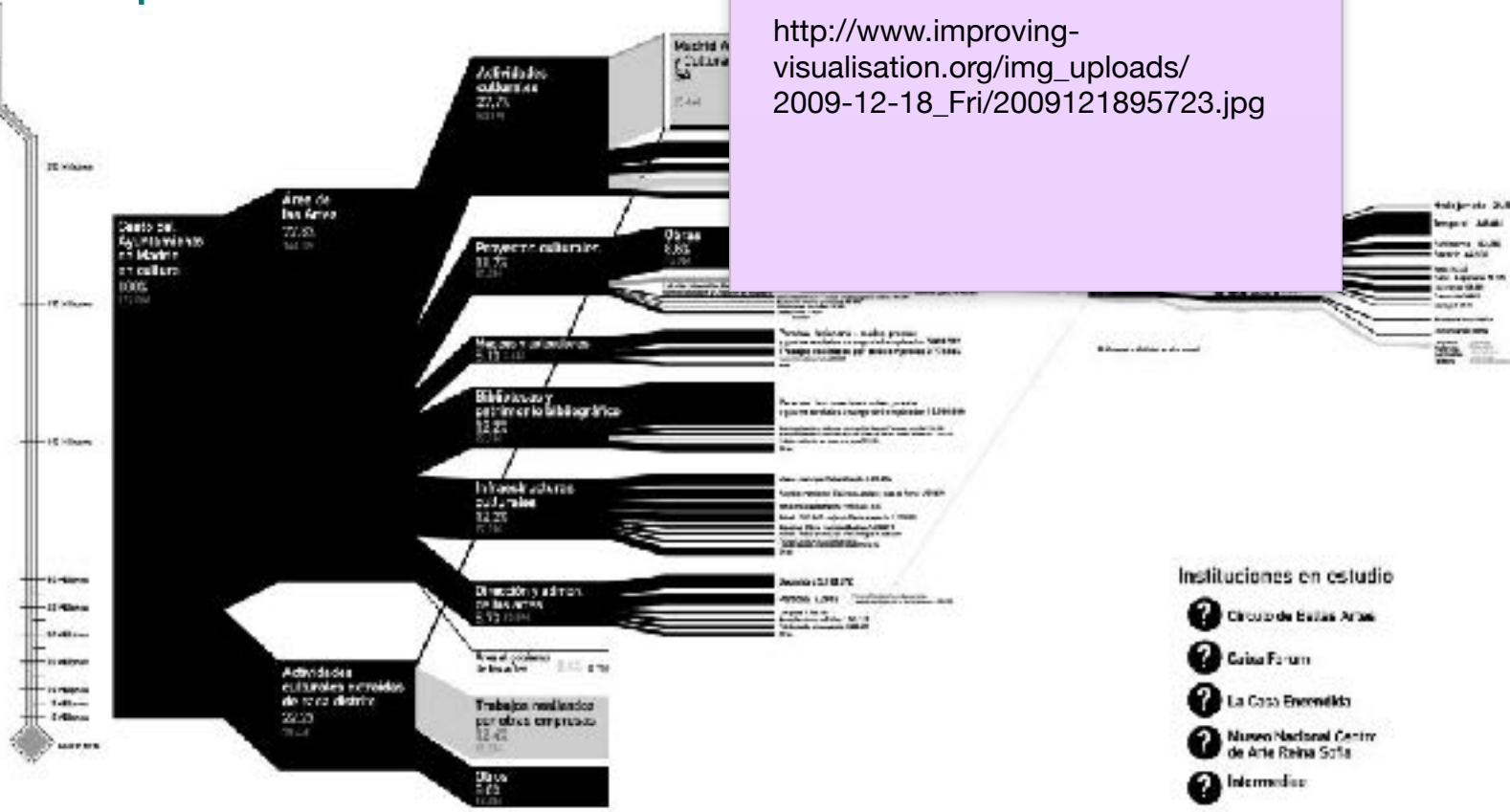
Categorical,  
quantitative-interval

## Visual:

Position,  
colour-hue,  
symbol



# Flow map

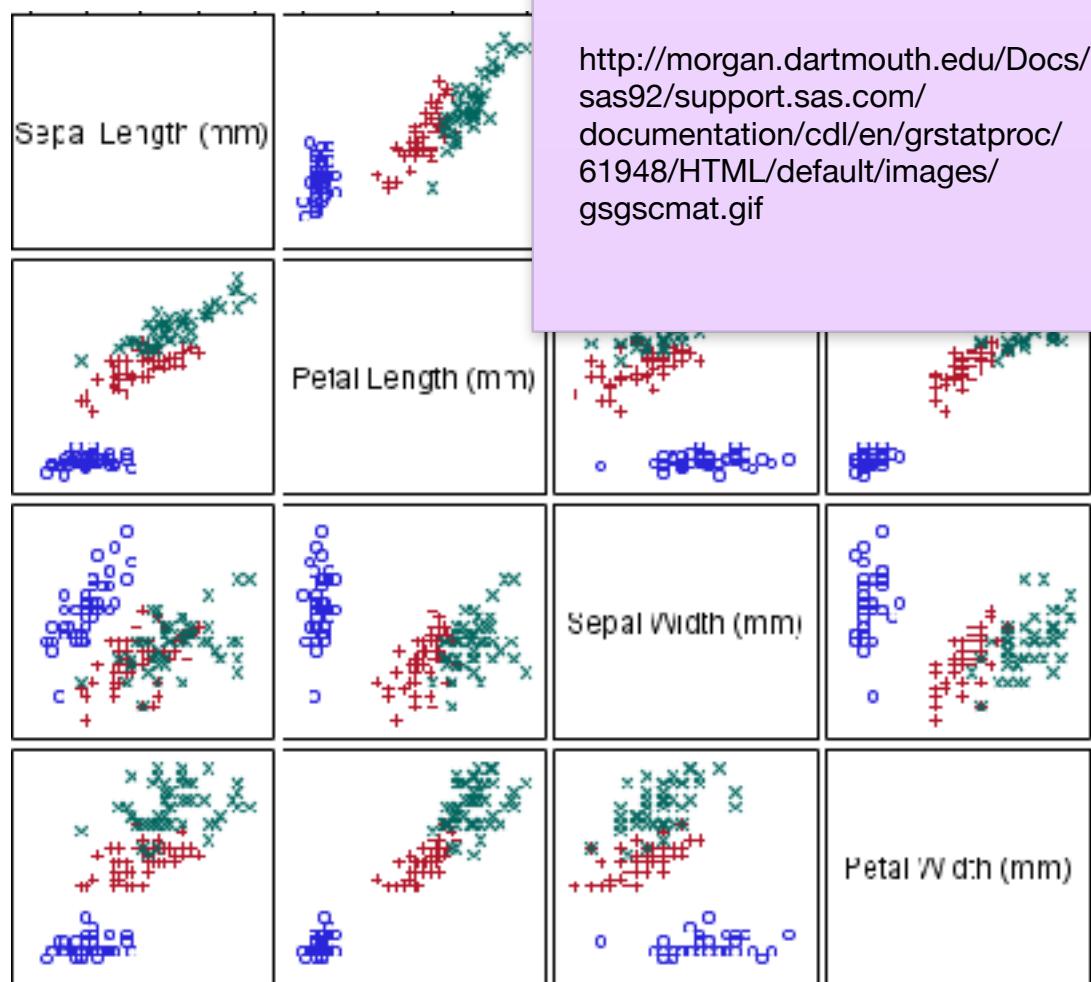


[http://www.improving-visualisation.org/img\\_uploads/2009-12-18\\_Fri/2009121895723.jpg](http://www.improving-visualisation.org/img_uploads/2009-12-18_Fri/2009121895723.jpg)

# Scatter plot - matrix

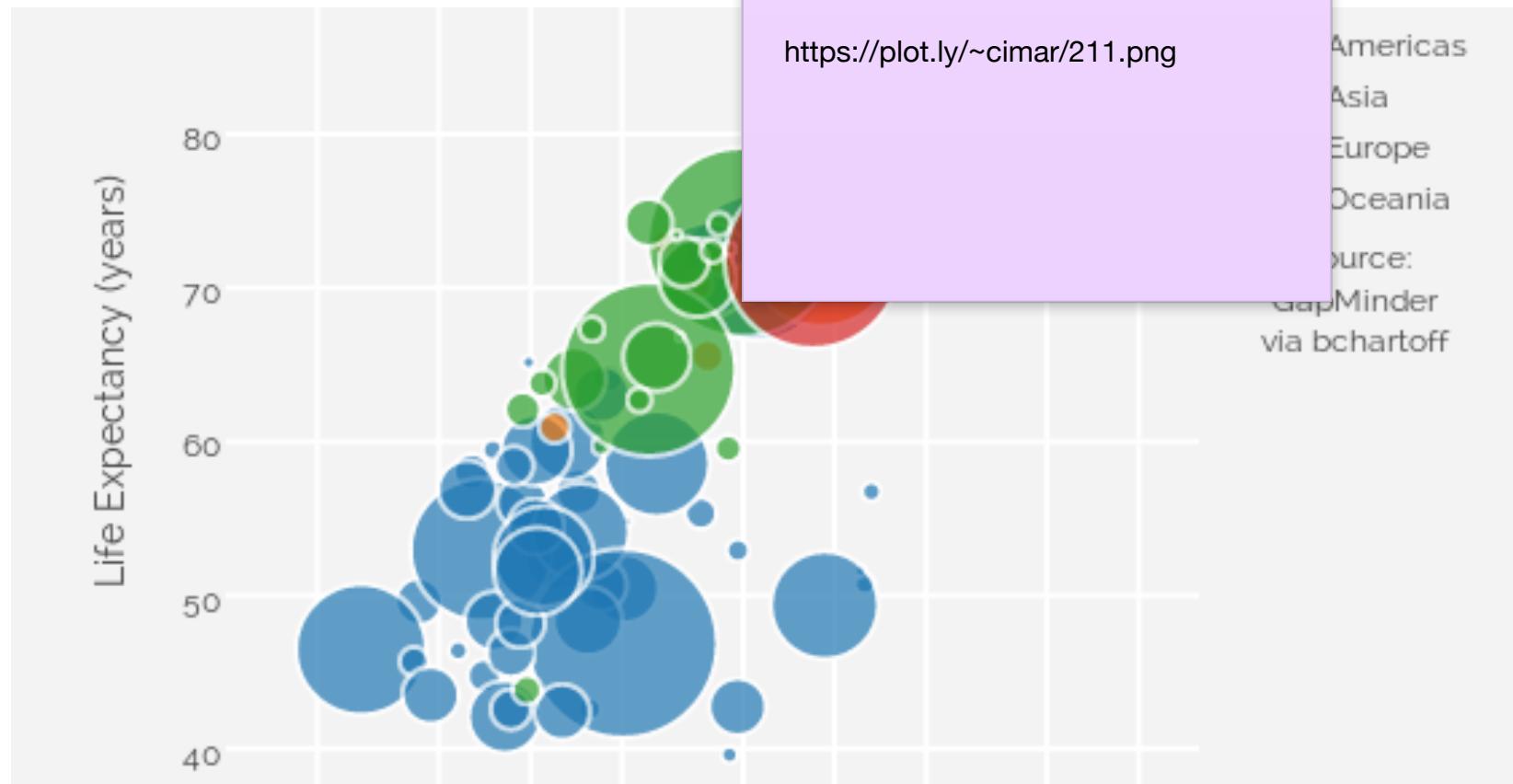
**Data:**  
Quantitative

**Visual:**  
Position,  
colour

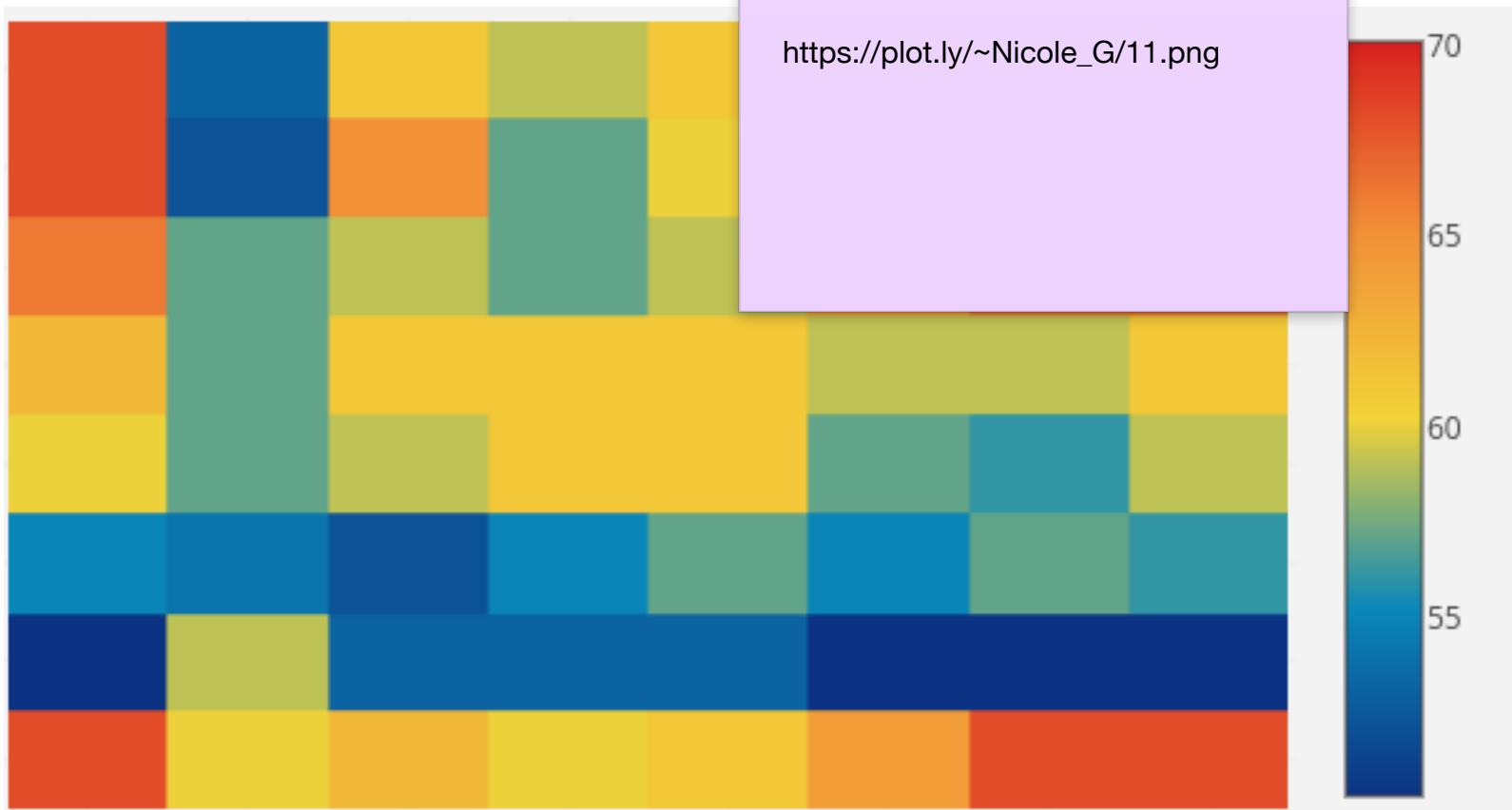


<http://morgan.dartmouth.edu/Docs/sas92/support.sas.com/documentation/cdl/en/grstatproc/61948/HTML/default/images/gsgscmat.gif>

# Bubble plot



## Heatmap (or matrix chart)



# Parallel sets (or parallel coordinates)

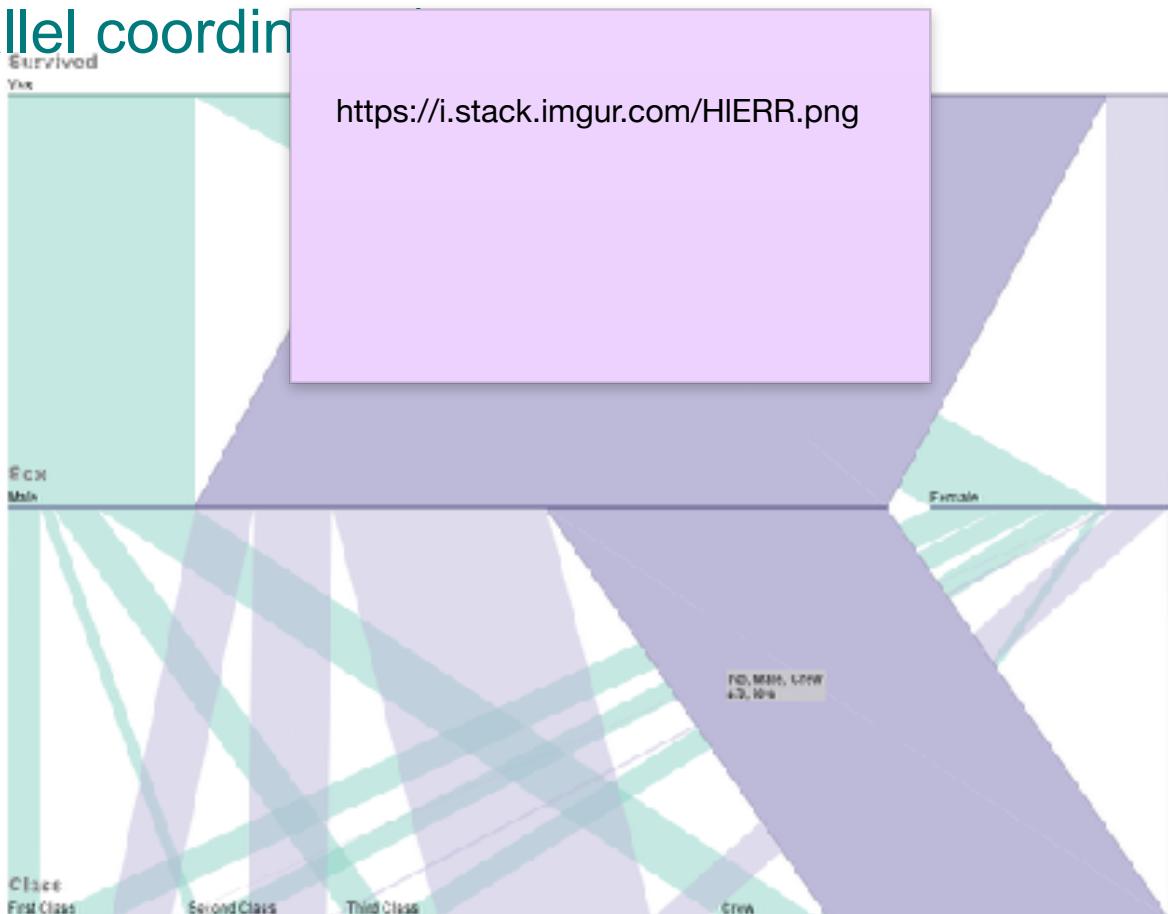
## Data:

Categorical,  
quantitative-ratio

## Visual:

Position,  
width,  
link,  
colour-hue

<https://i.stack.imgur.com/HIERR.png>



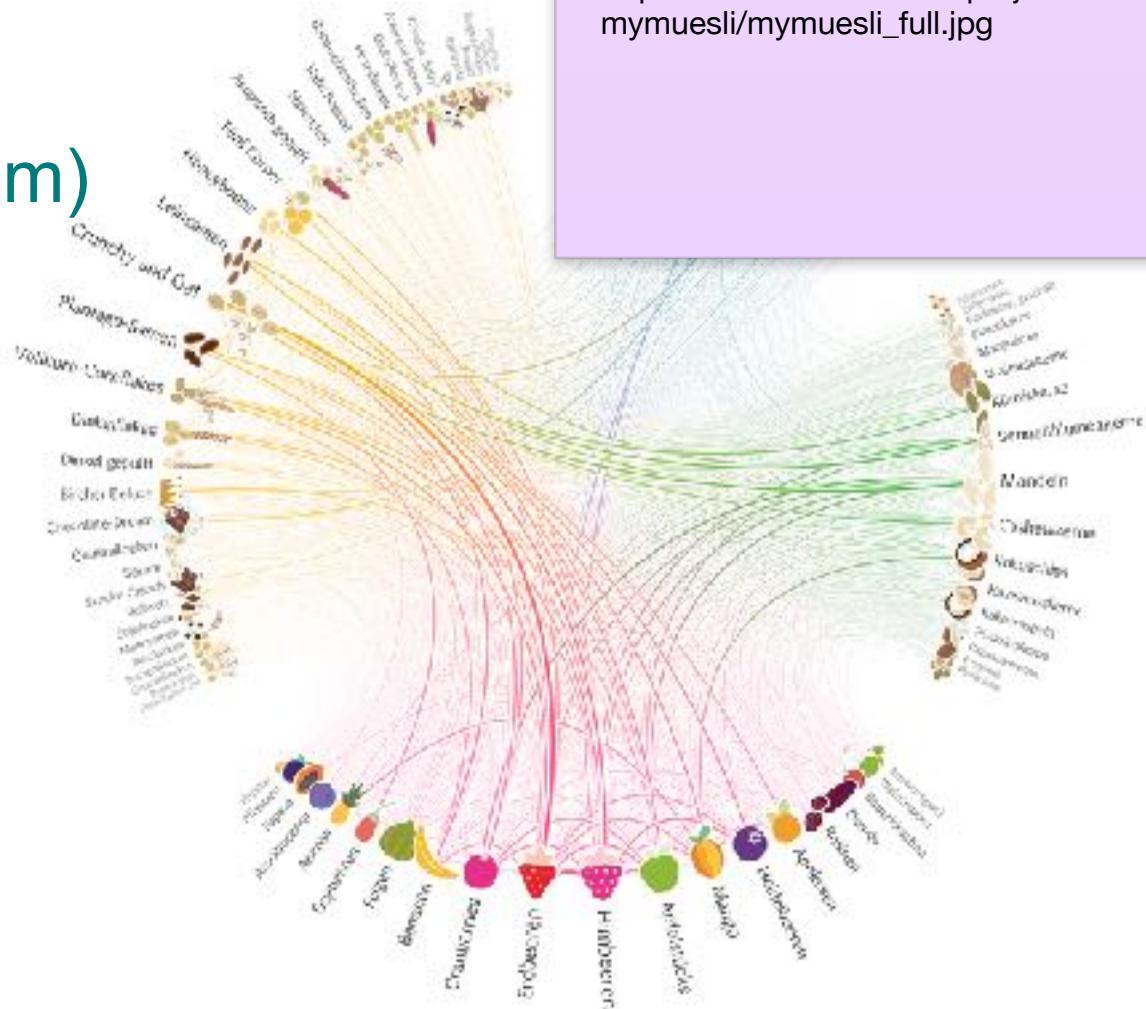
# Radial network (or chord diagram)

# Data:

## Categorical, quantitative-ratio

## Visual:

Position, connection,  
width, colour-hue,  
colour-lightness,  
symbol, size



# Network diagram (or force-directed graph)

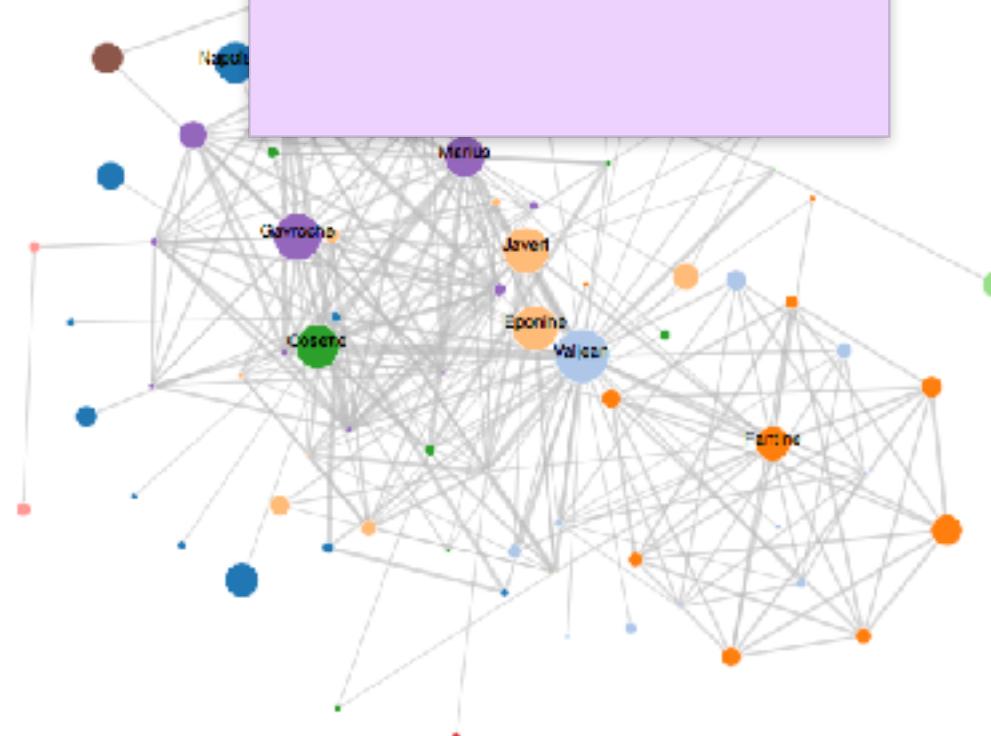
## Data:

Categorical-nominal,  
quantitative-ratio

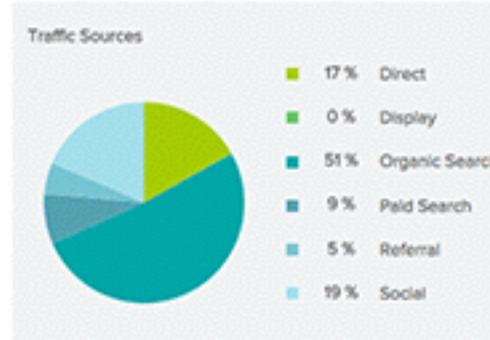
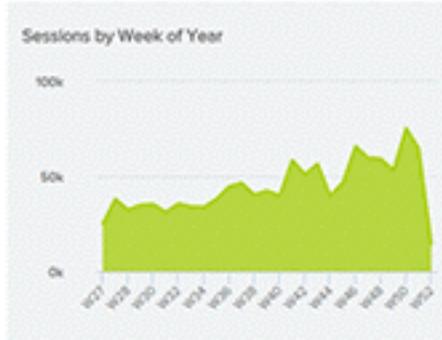
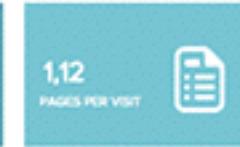
## Visual:

Position,  
connection,  
area,  
colour-hue

<https://yitianfan.files.wordpress.com/2015/02/screen-shot-2015-02-13-at-3-50-04-pm.png>

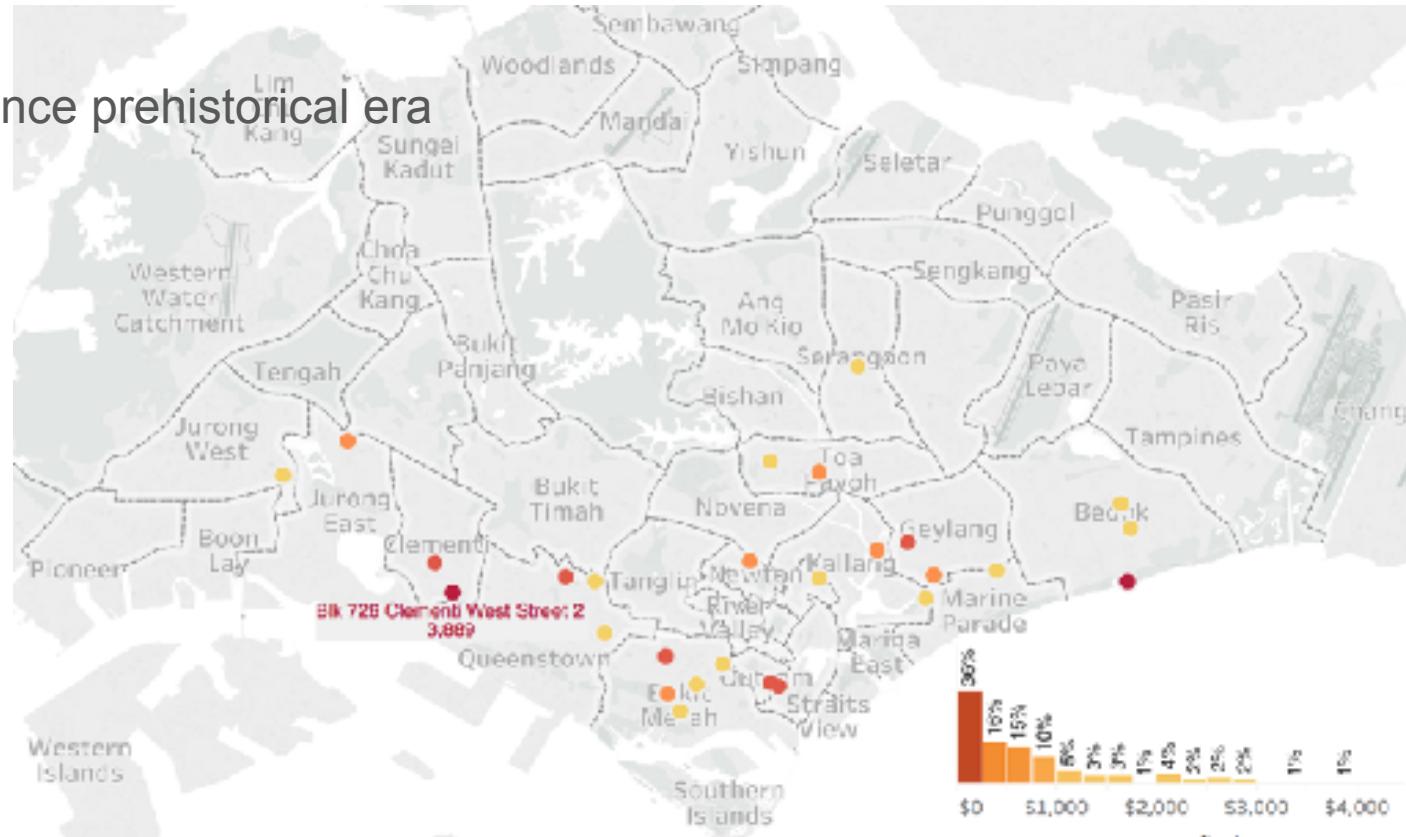


# Dashboards

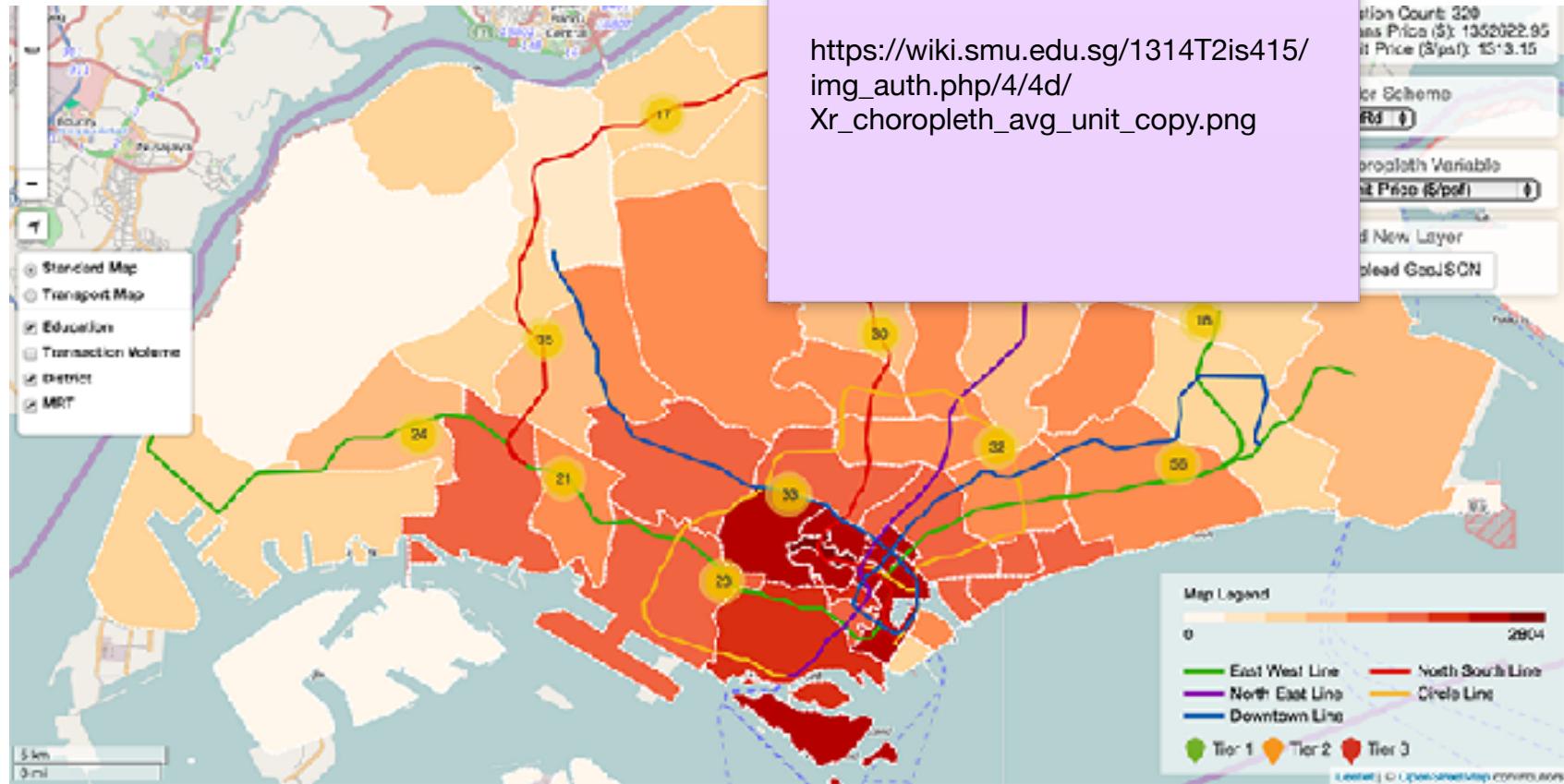


# Maps

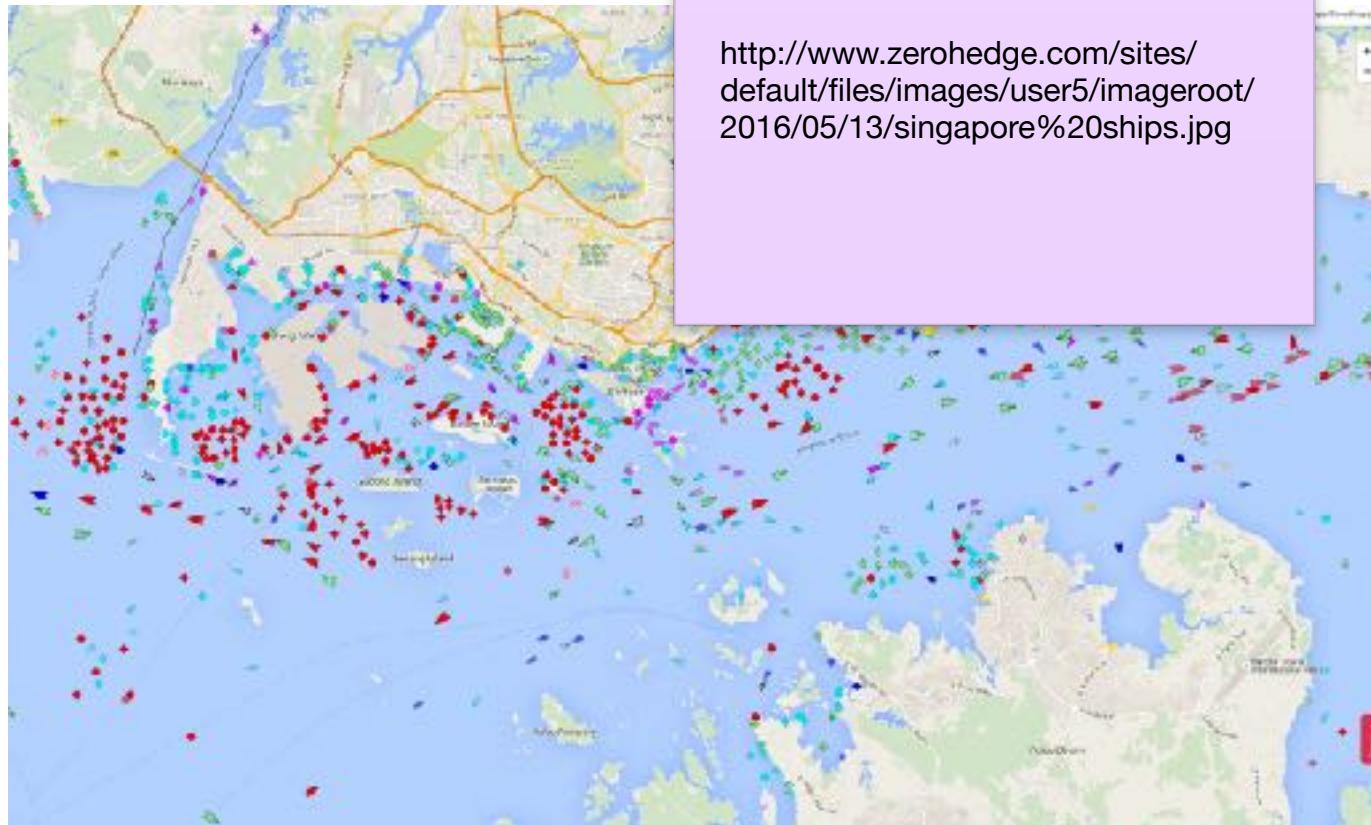
Used since prehistorical era



# Choropleth map



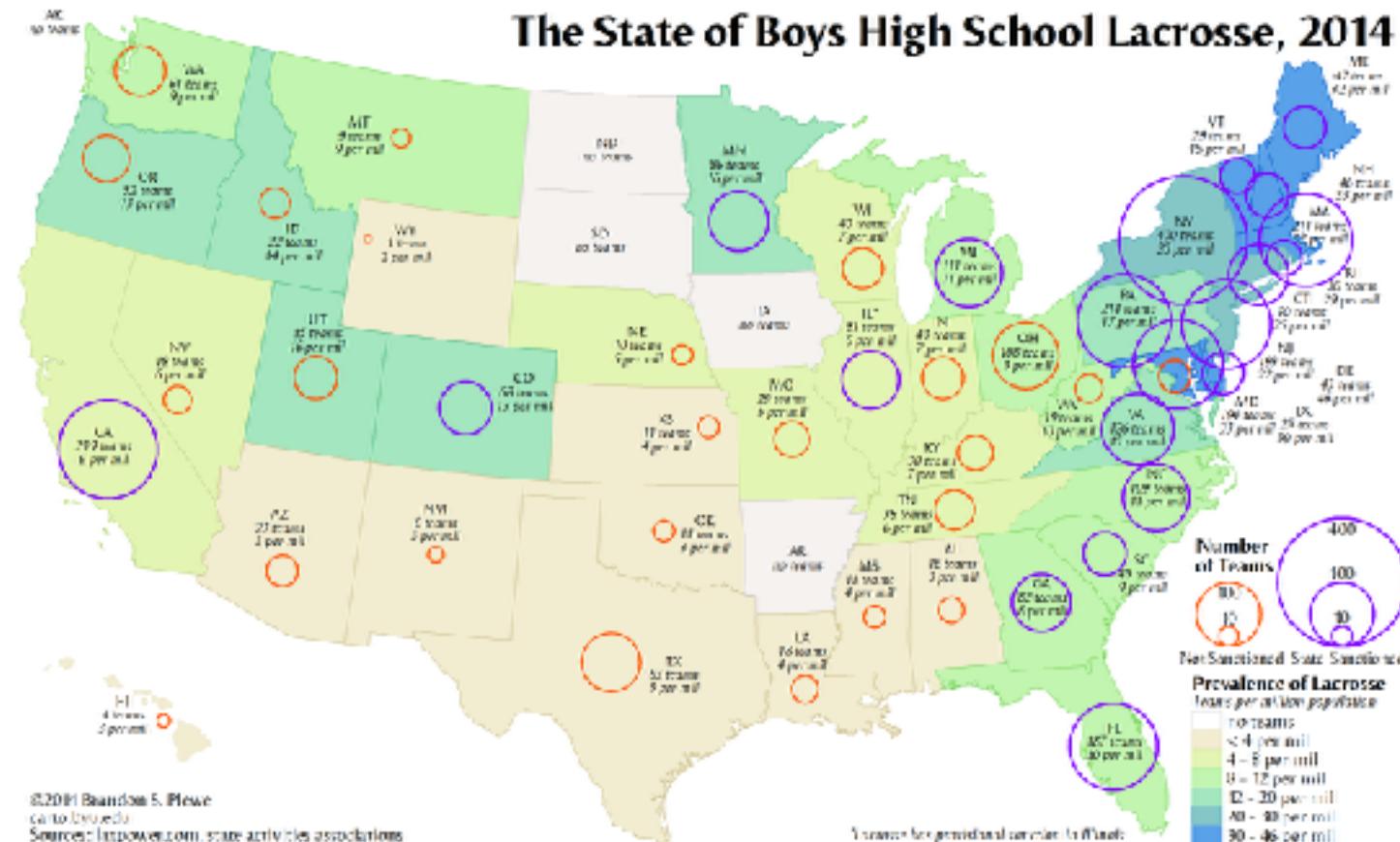
## Dot plot map



<http://www.zerohedge.com/sites/default/files/images/user5/imageroot/2016/05/13/singapore%20ships.jpg>

## Bubble plot map

## **The State of Boys High School Lacrosse, 2014**



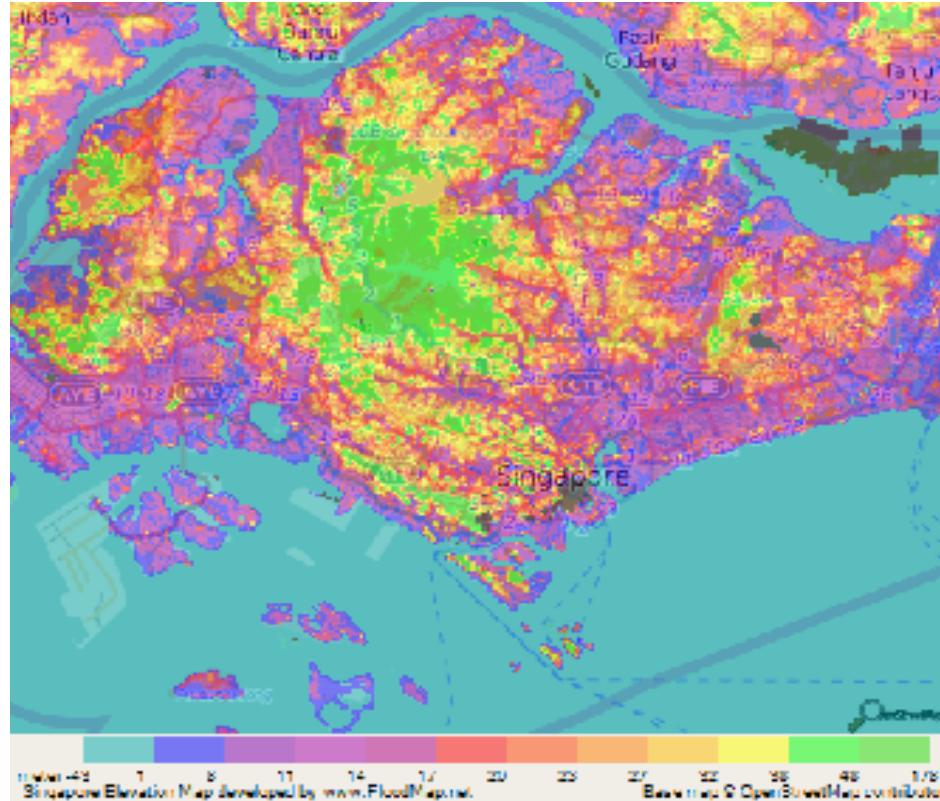
# Topological map (or contour map or Isarithmic map)

## Data:

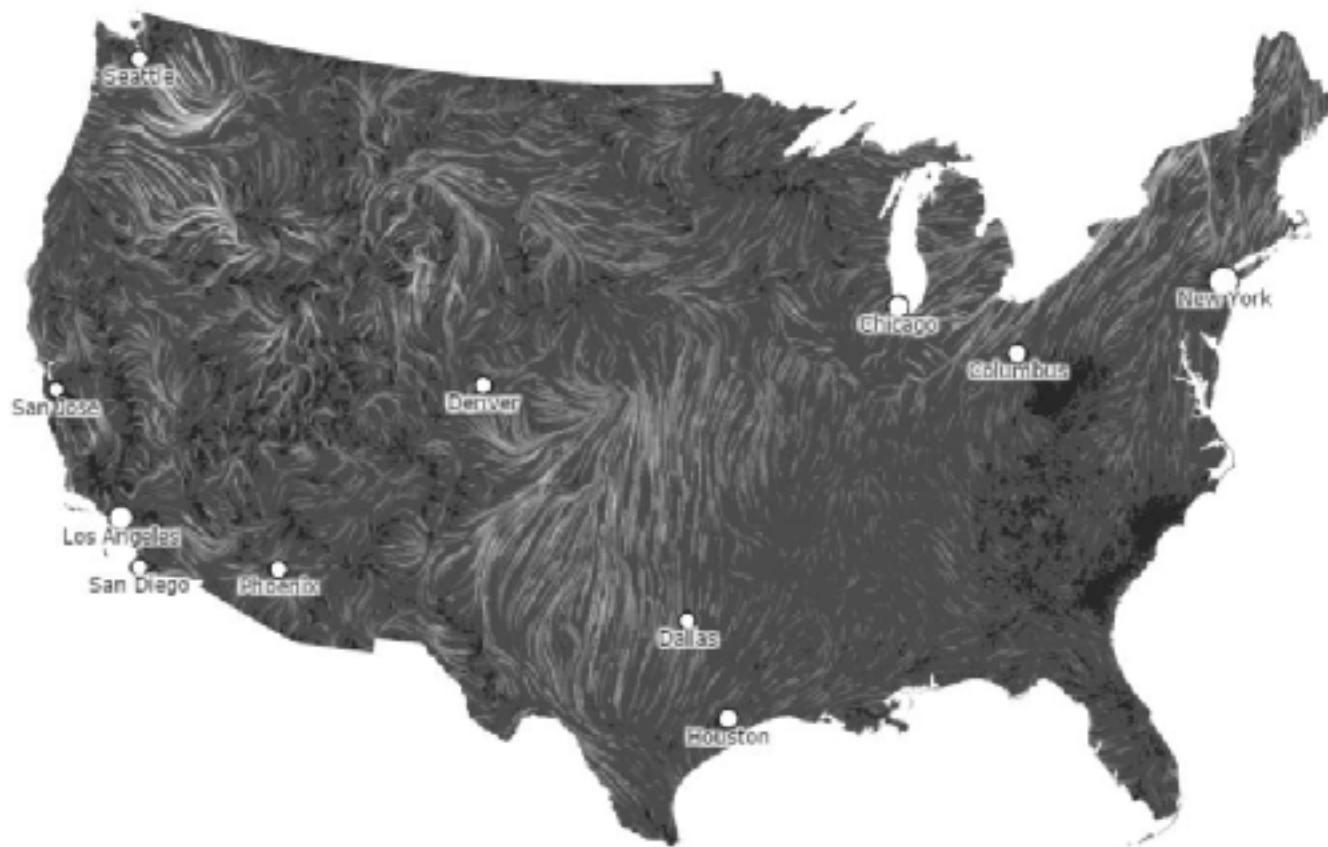
Categorical,  
quantitative

## Visual:

Position,  
colour-hue,  
colour-saturation,  
colour-darkness



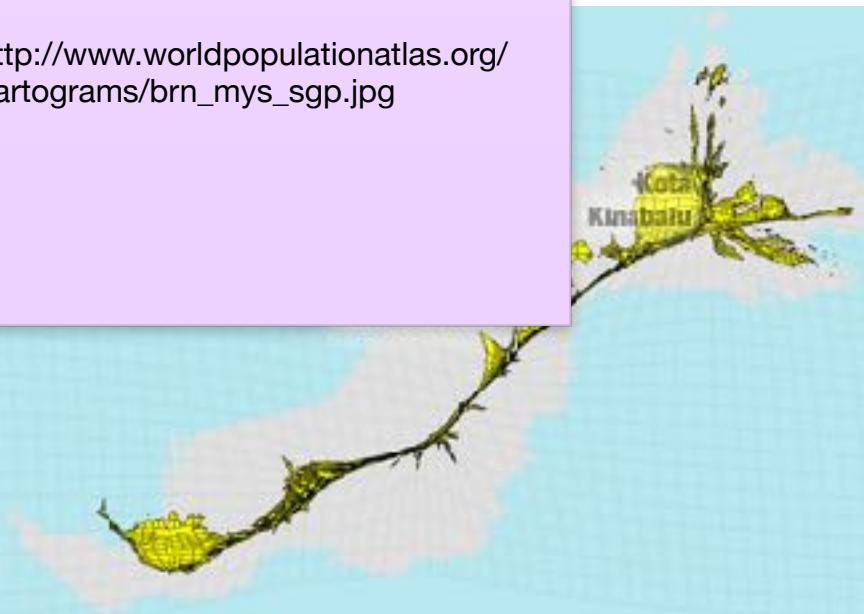
# Particle flow map



# Cartogram



[http://www.worldpopulationatlas.org/  
cartograms/brn\\_mys\\_sgp.jpg](http://www.worldpopulationatlas.org/cartograms/brn_mys_sgp.jpg)

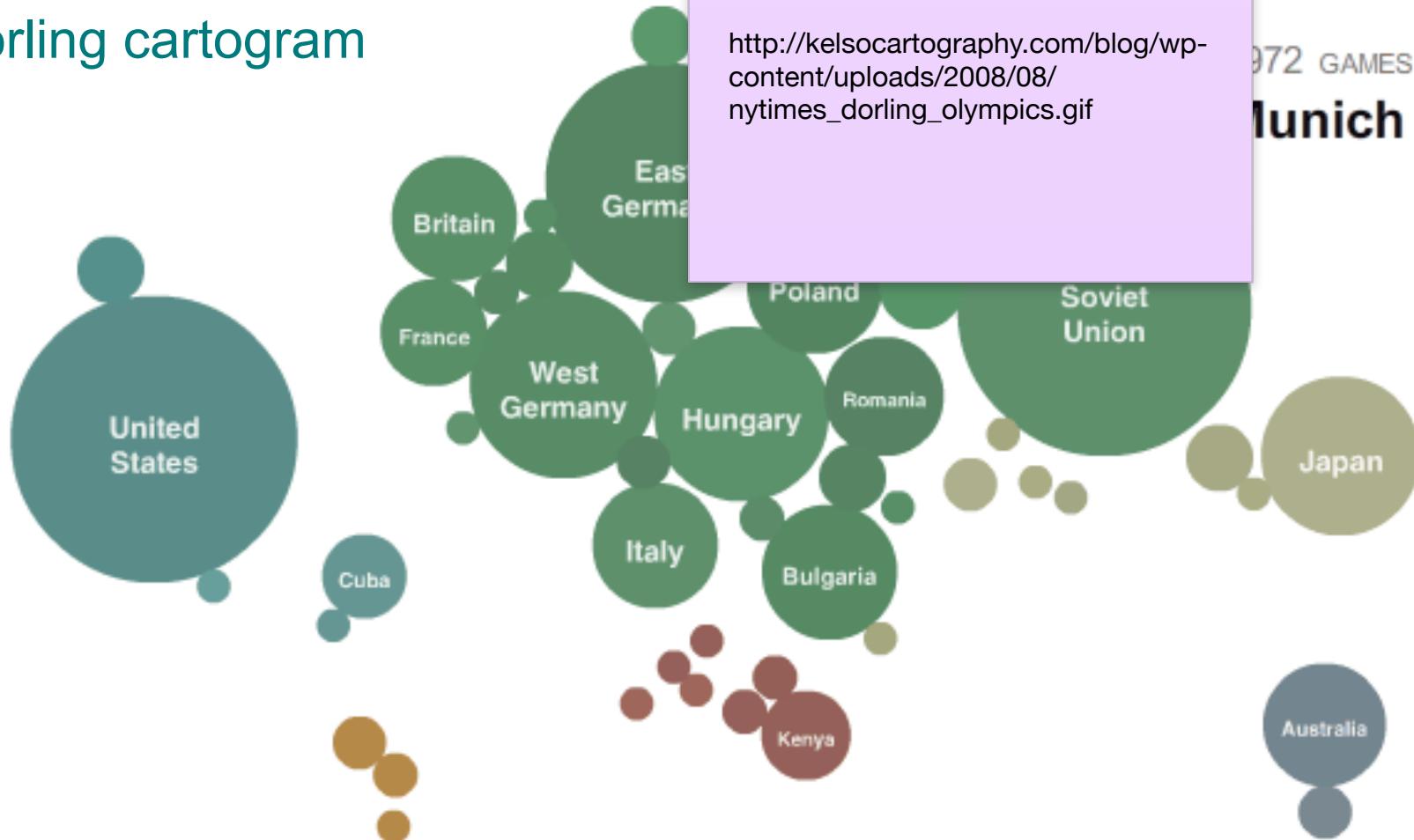


# Dorling cartogram

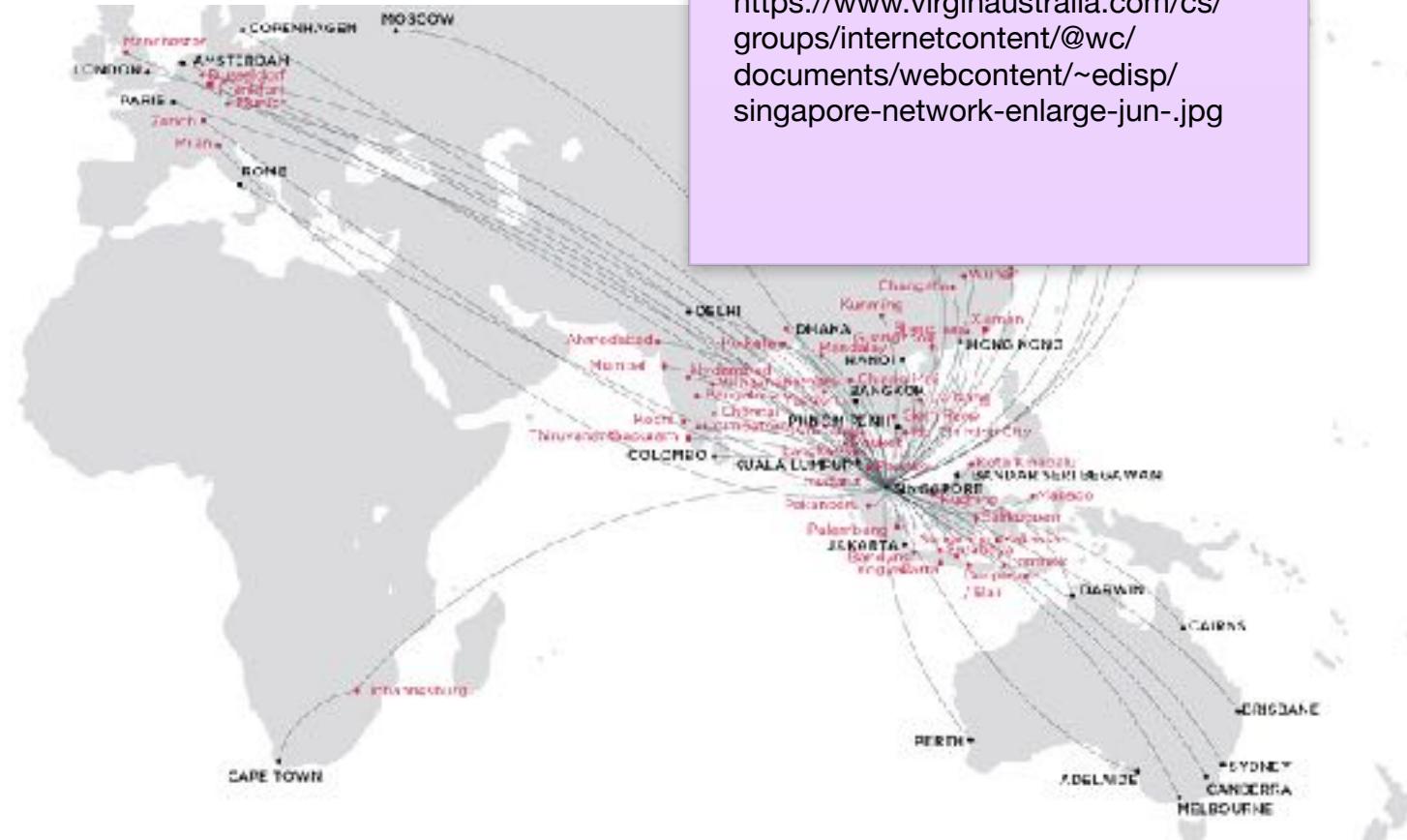
[http://kelsocartography.com/blog/wp-content/uploads/2008/08/nytimes\\_dorling\\_olympics.gif](http://kelsocartography.com/blog/wp-content/uploads/2008/08/nytimes_dorling_olympics.gif)

972 GAMES

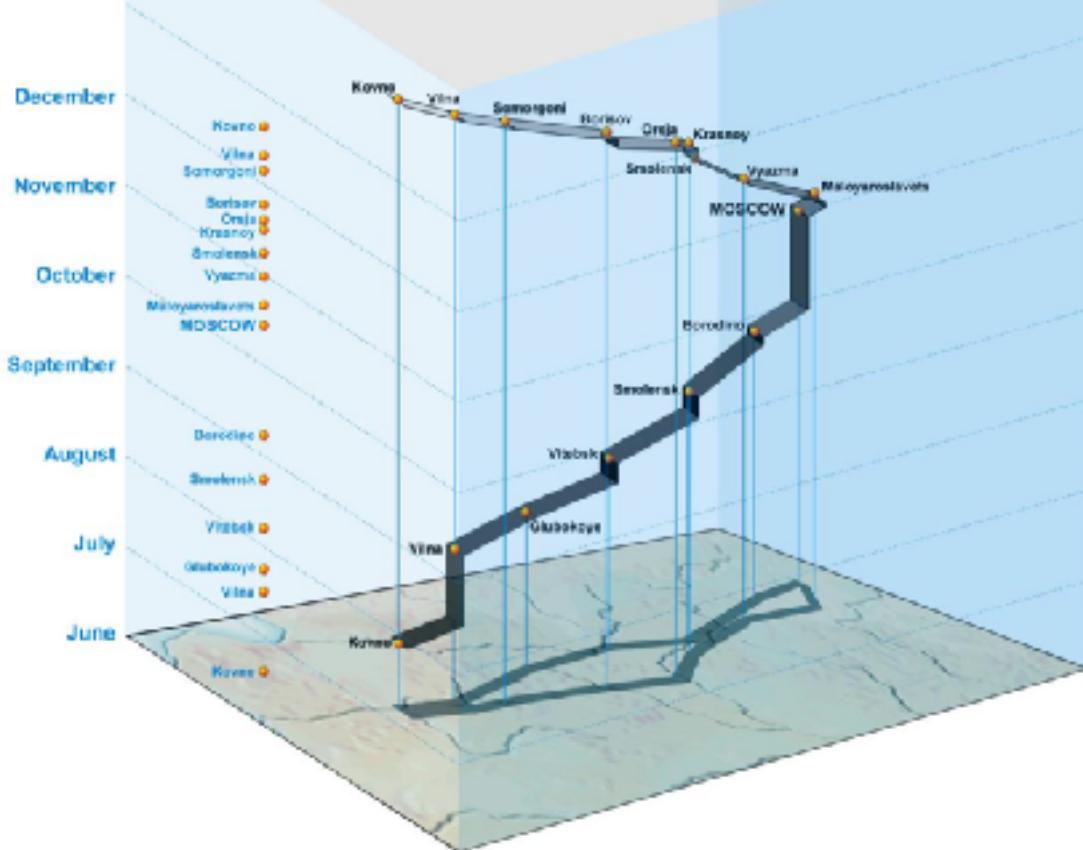
Munich



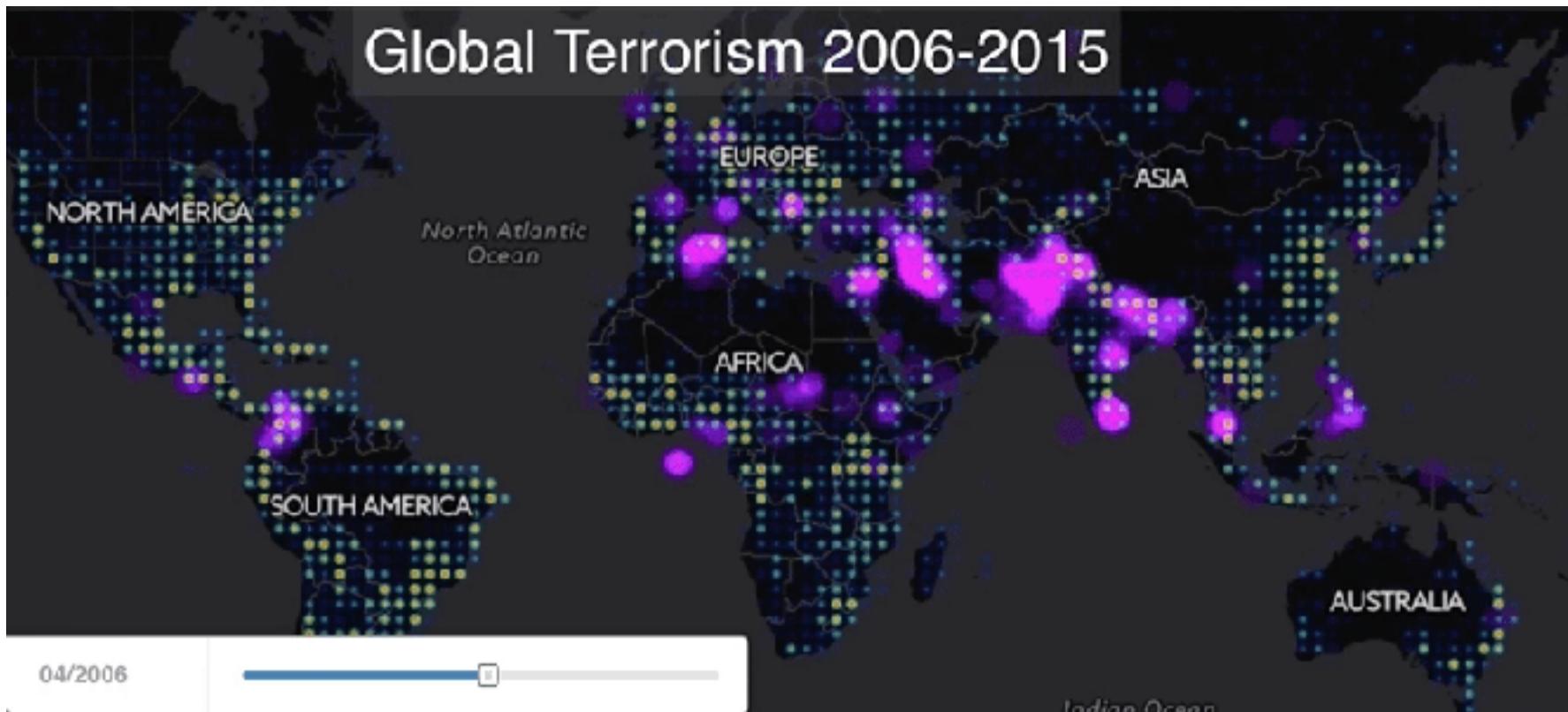
# Network connection map



# Spatial-Temporal Cube Visualisation



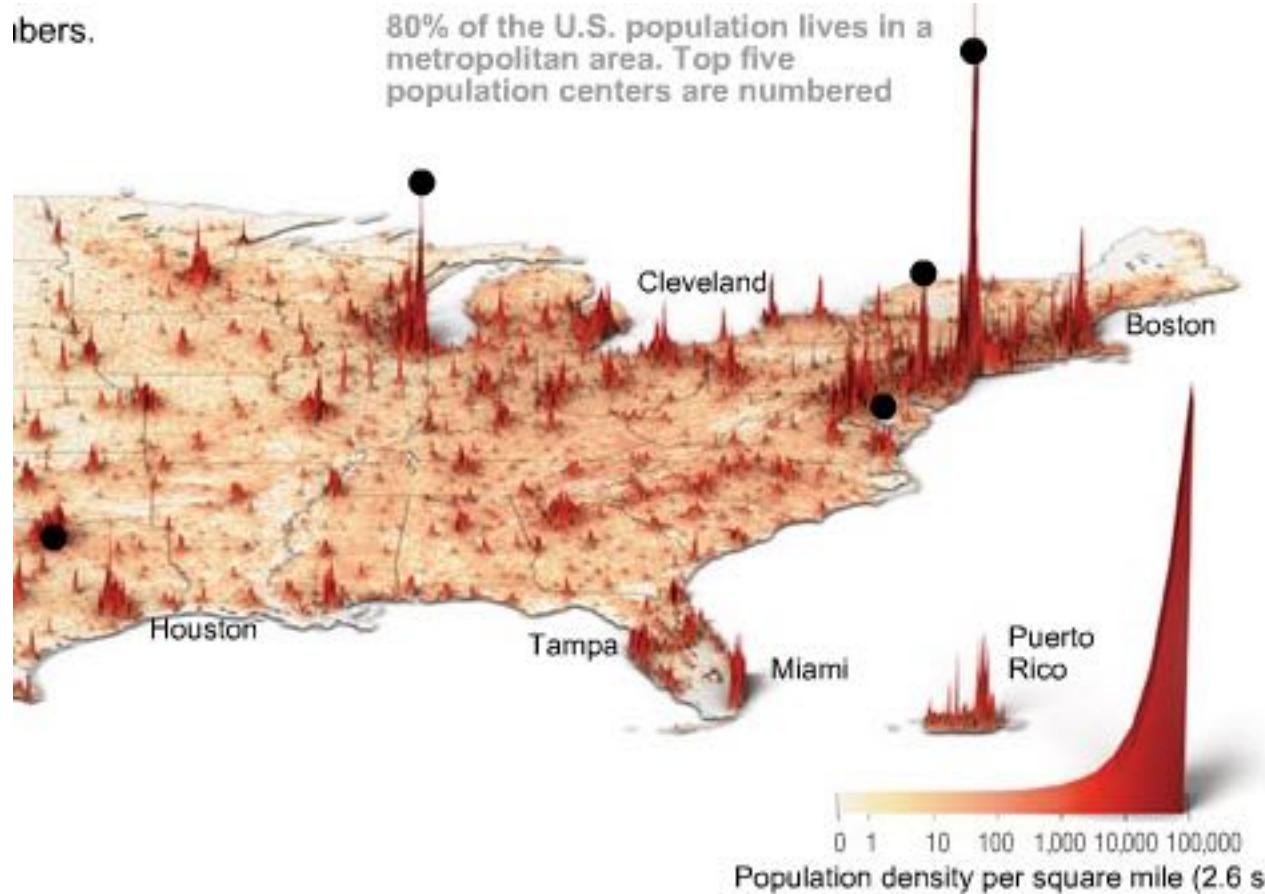
## Animated map



# 3D Map

bers.

80% of the U.S. population lives in a metropolitan area. Top five population centers are numbered



# Virtual reality



Thank you 😊



# Coming soon ...

Our next event:

WWCode Connect Viewing Night

Weekly session:

Social Coding Monday