

科技论文实验数据统计

分析与可视化

张立国

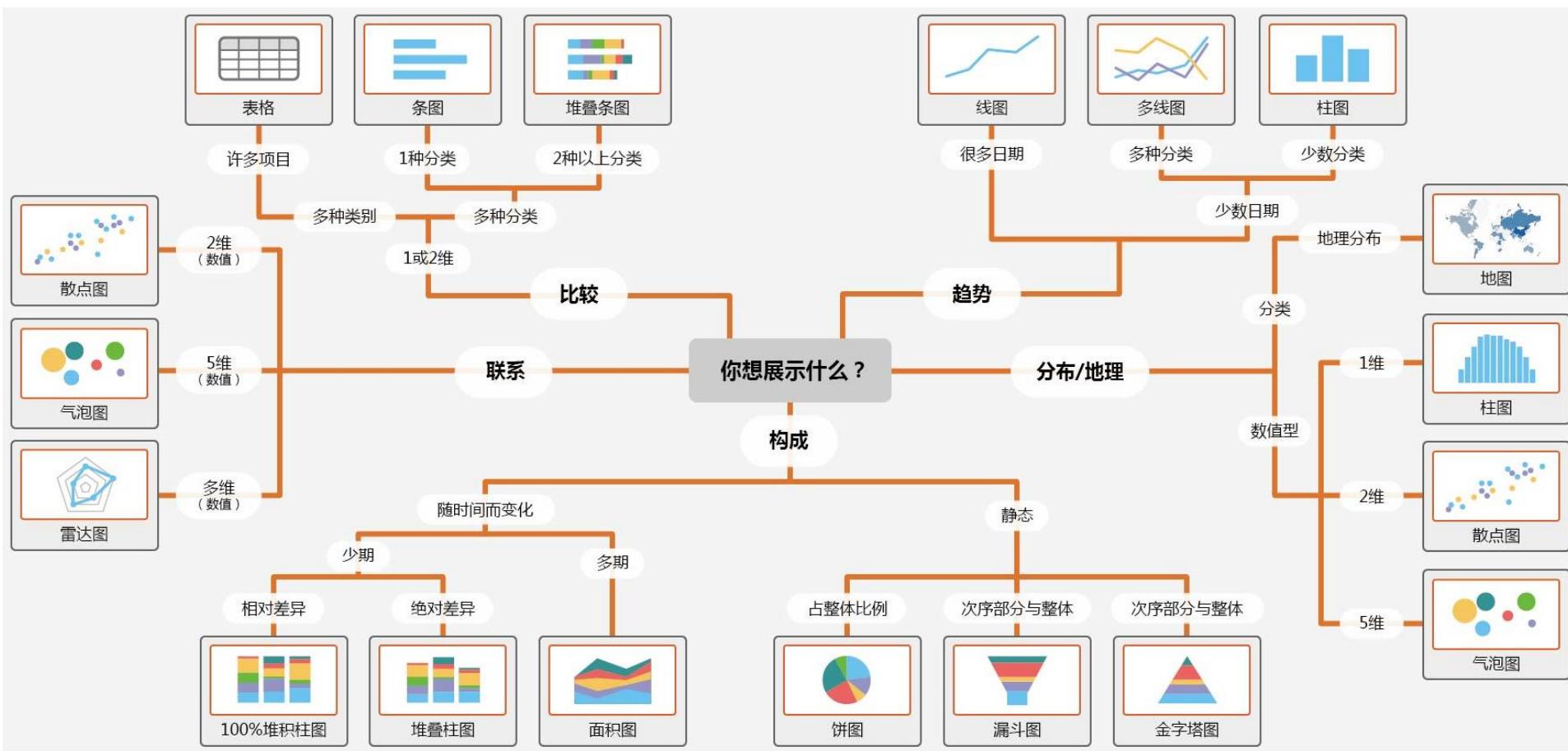


大工至善·大学至真



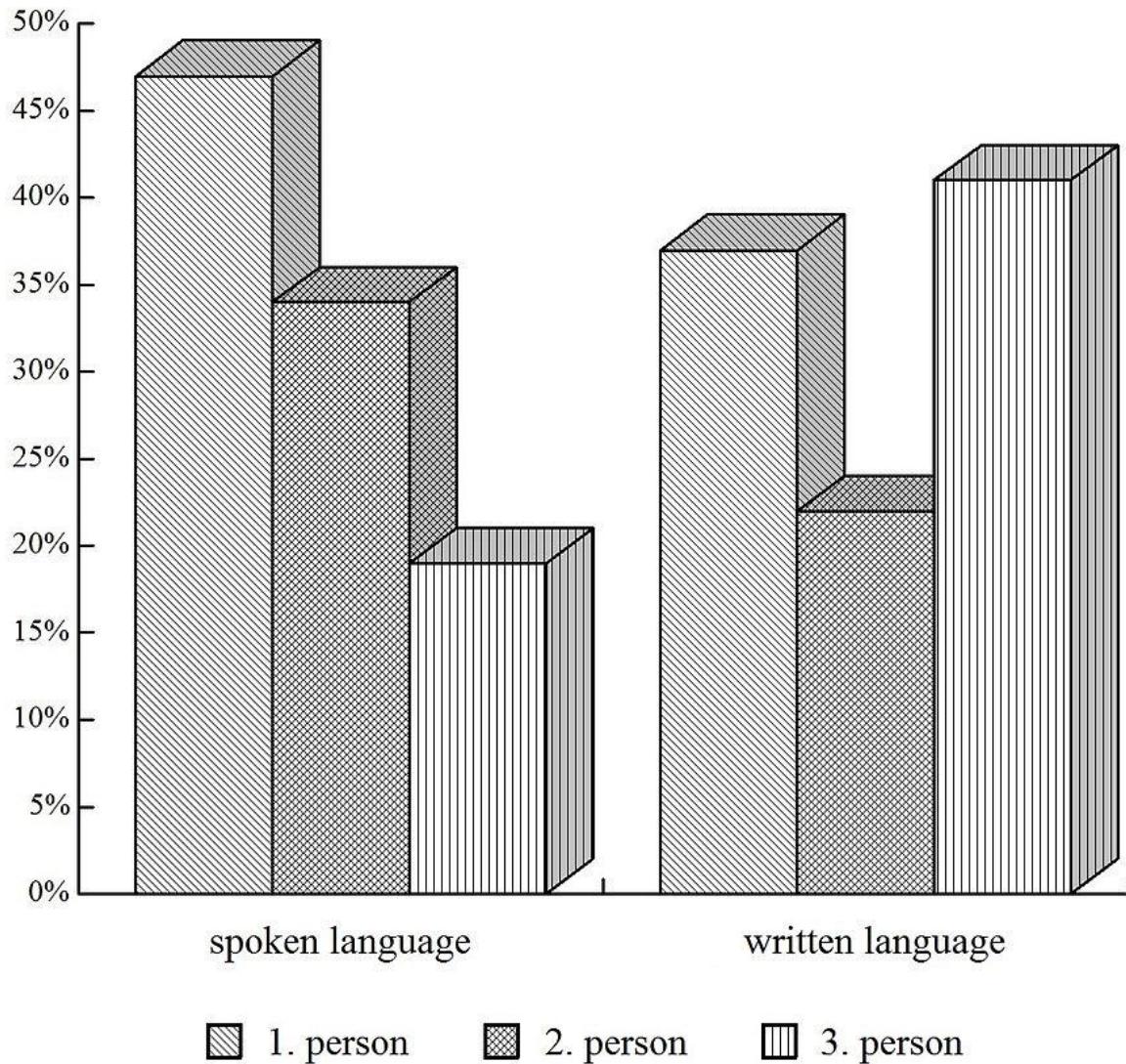
数据可视化

如何选择图表的类型？



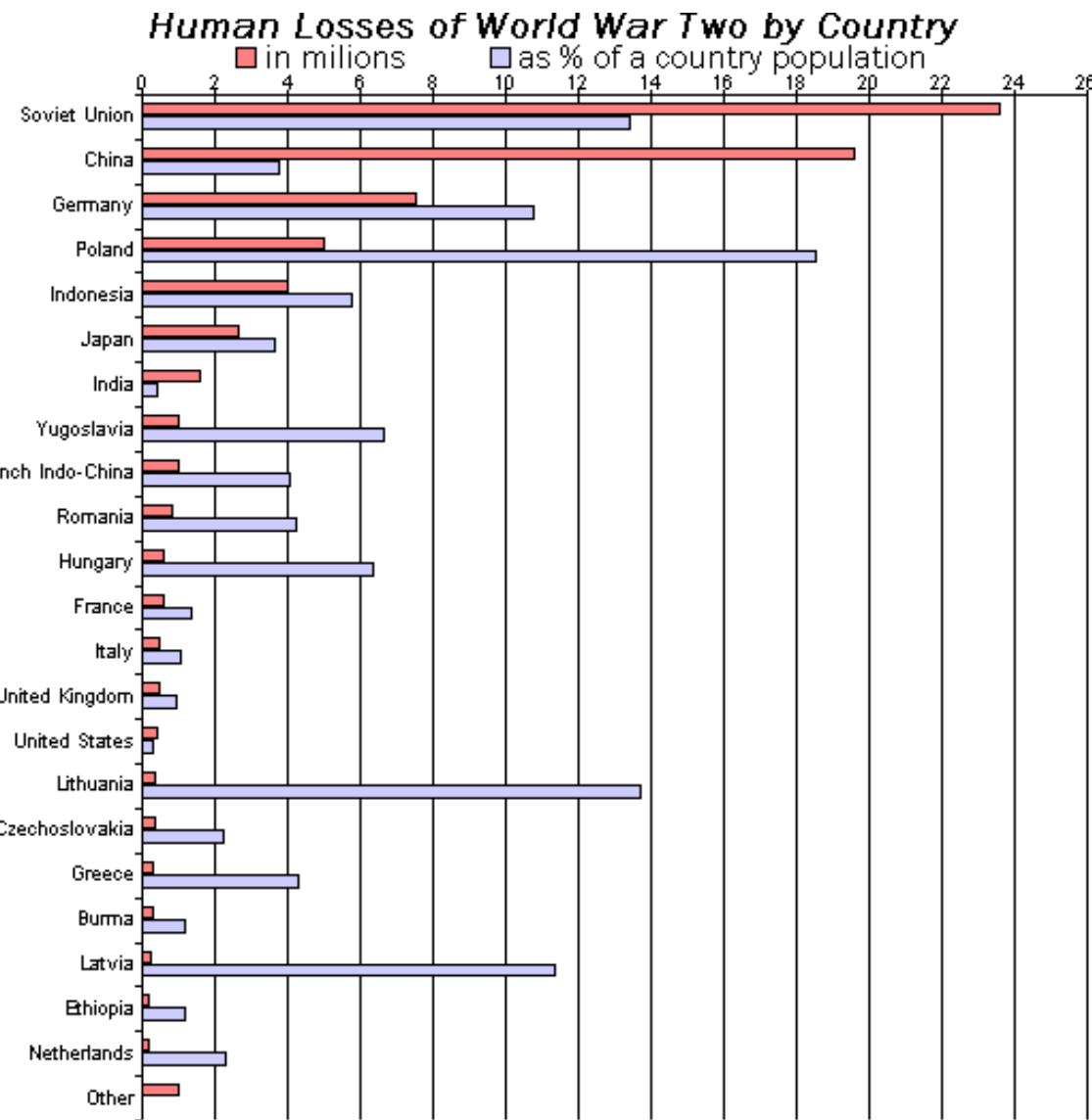
数据可视化

柱状图



数据可视化

柱状图

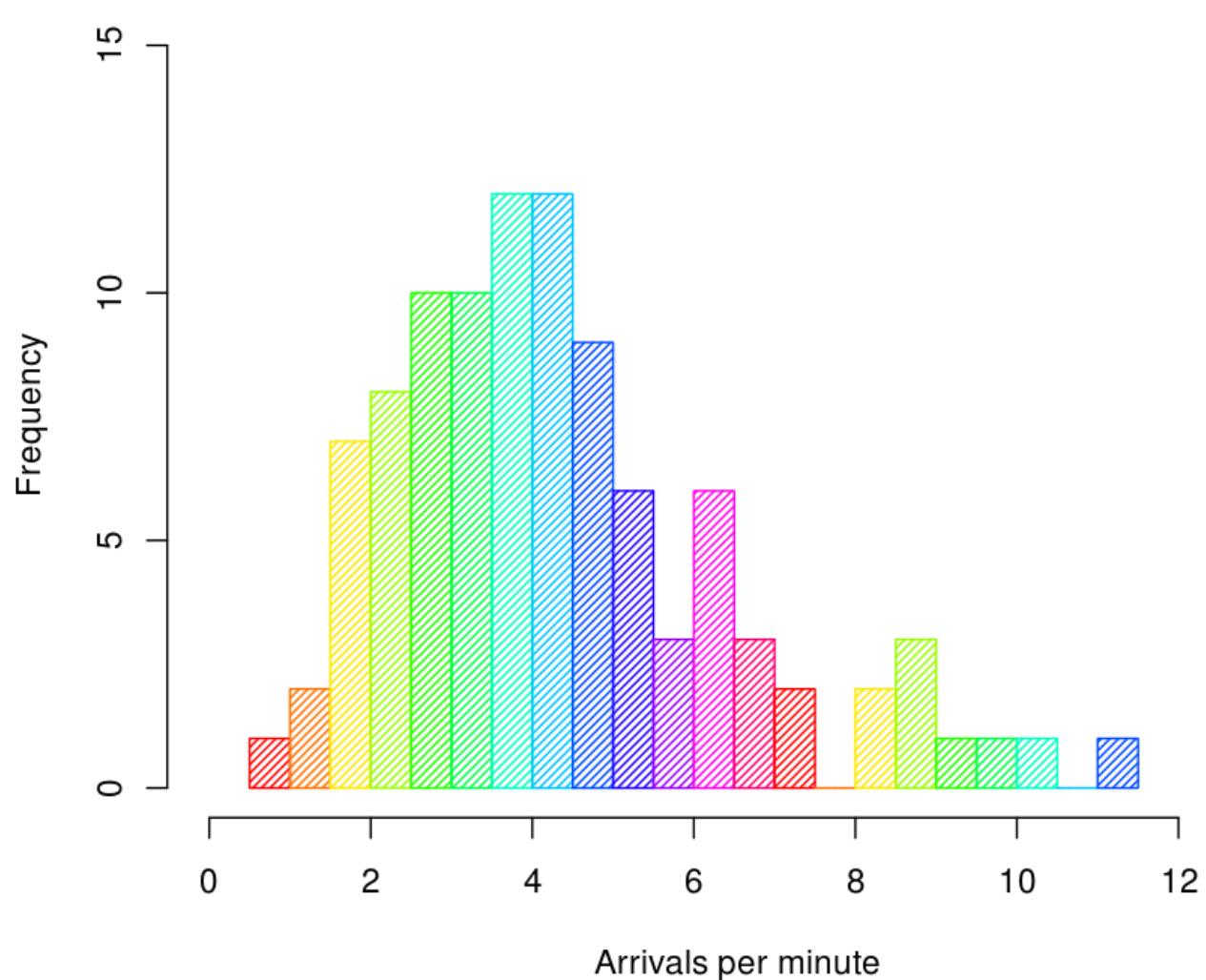


数据可视化

直方图

$$n = \sum_{i=1}^k m_i$$

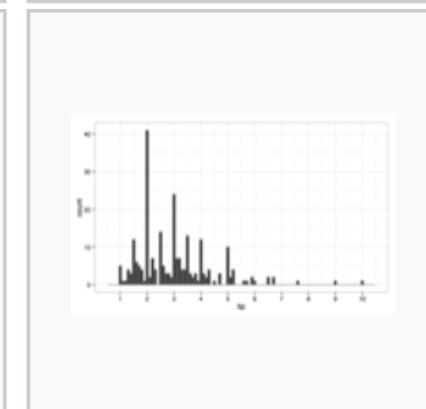
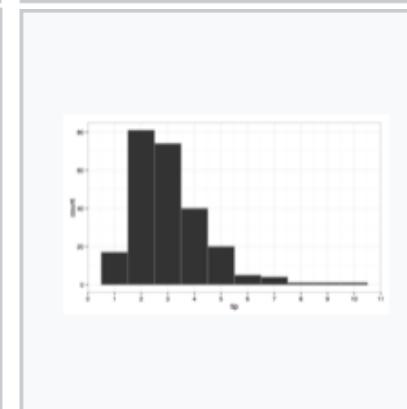
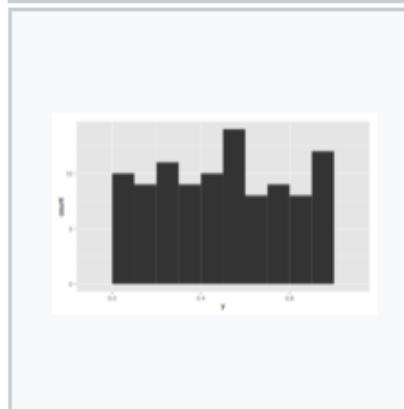
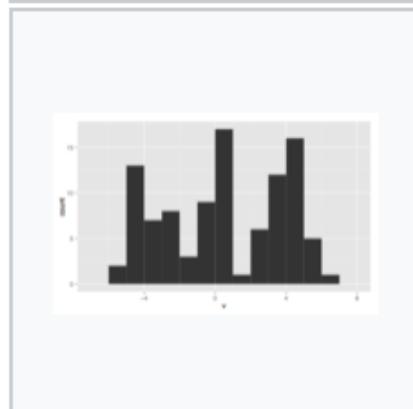
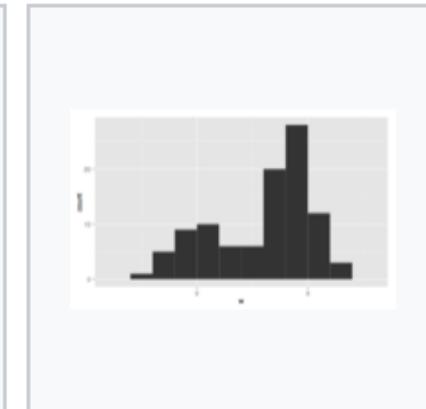
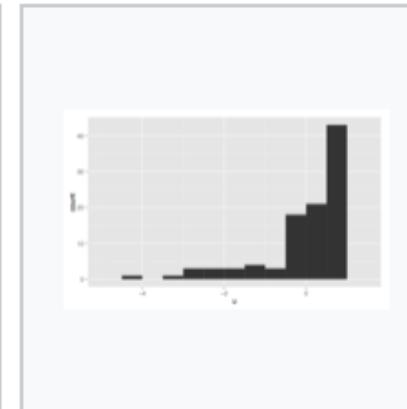
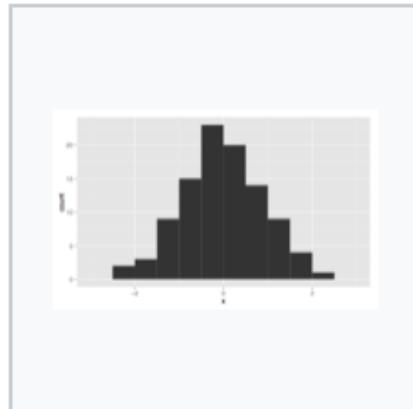
Histogram of arrivals



数据可视化

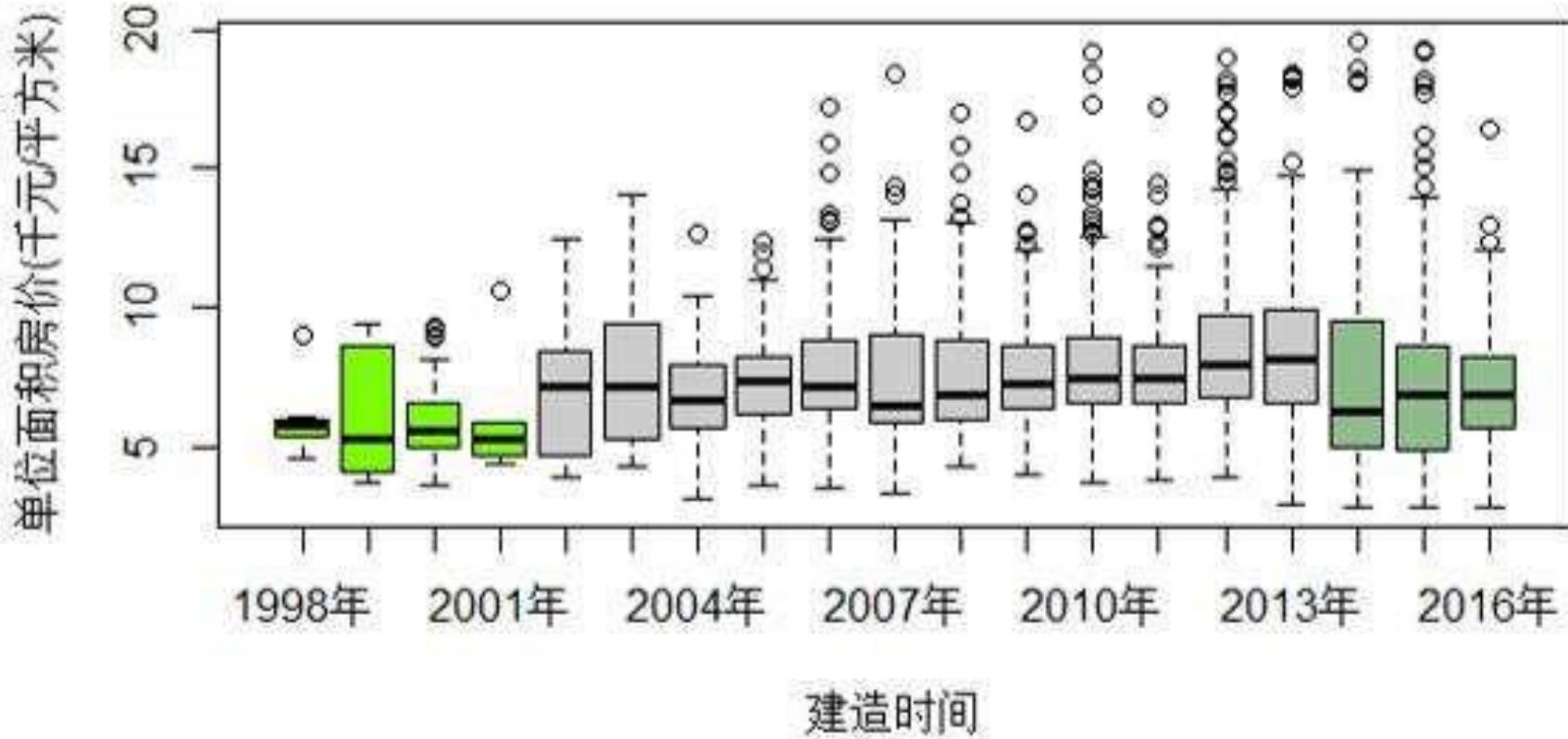
直方图

$$n = \sum_{i=1}^k m_i$$



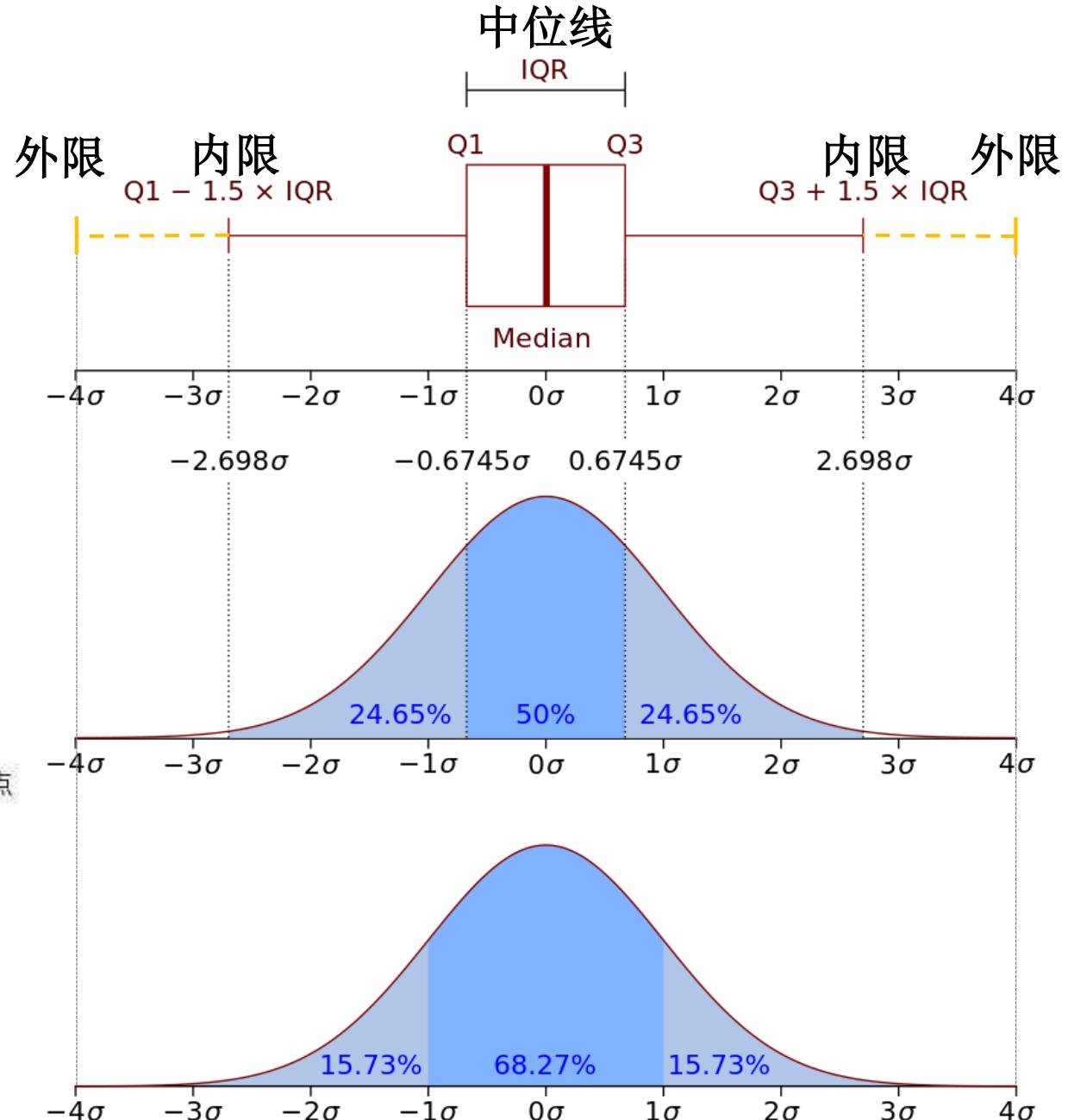
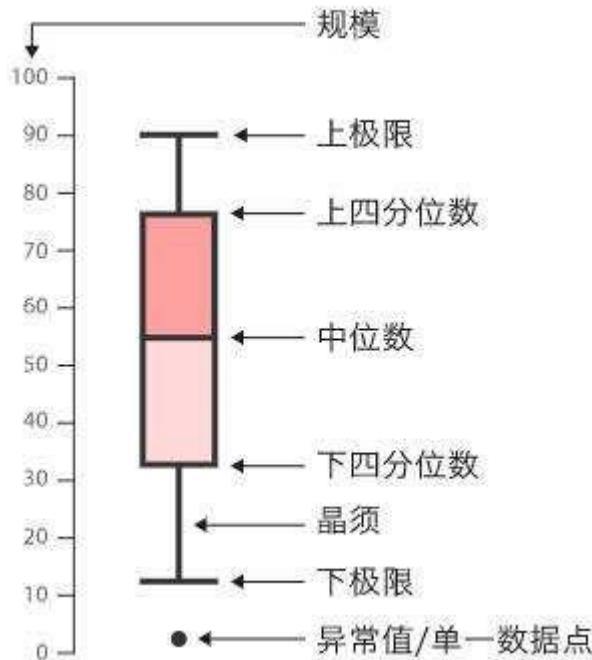
数据可视化

箱线图



数据可视化

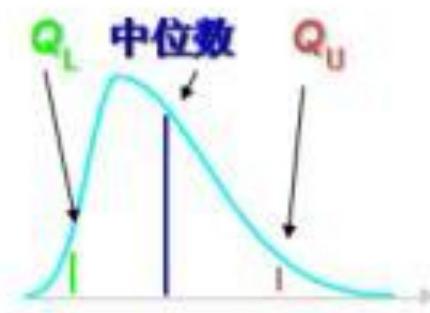
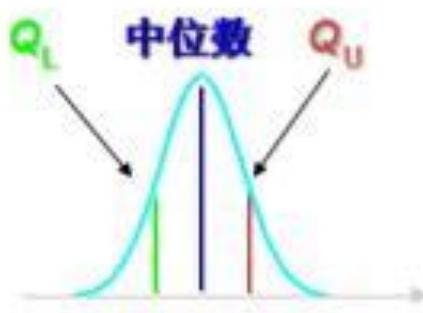
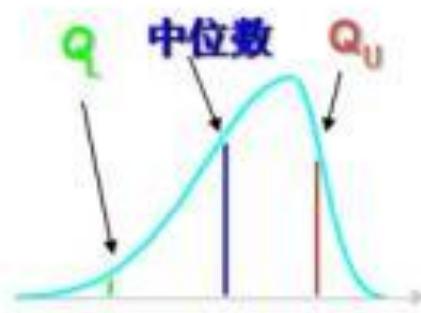
箱线图



数据可视化

箱线图

分布的形状与箱线图



左偏分布



对称分布

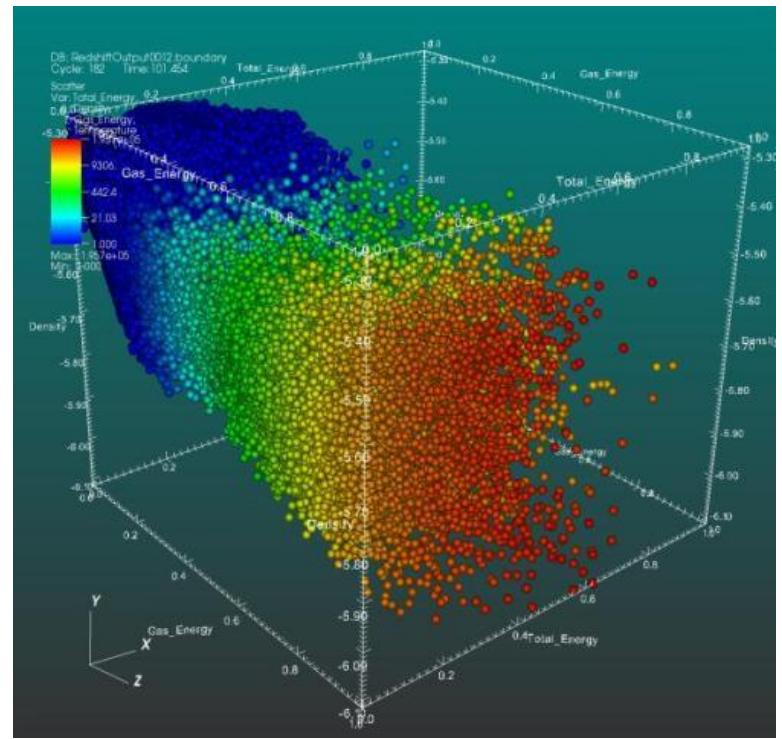
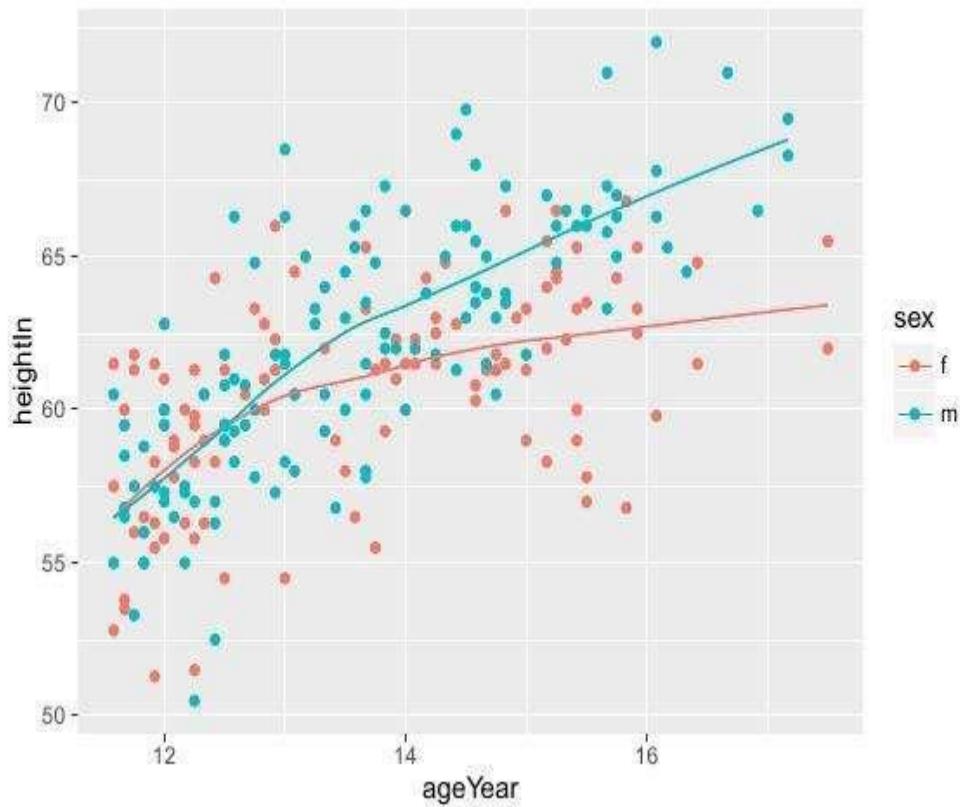


右偏分布

不同分布的箱线图

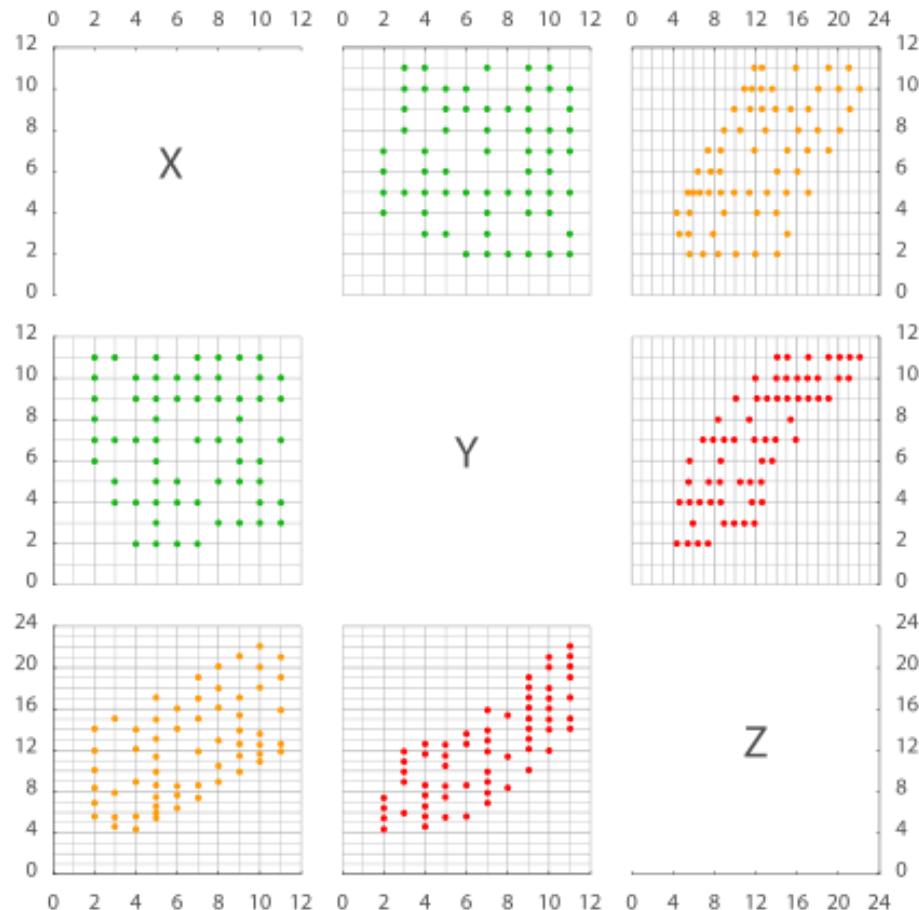
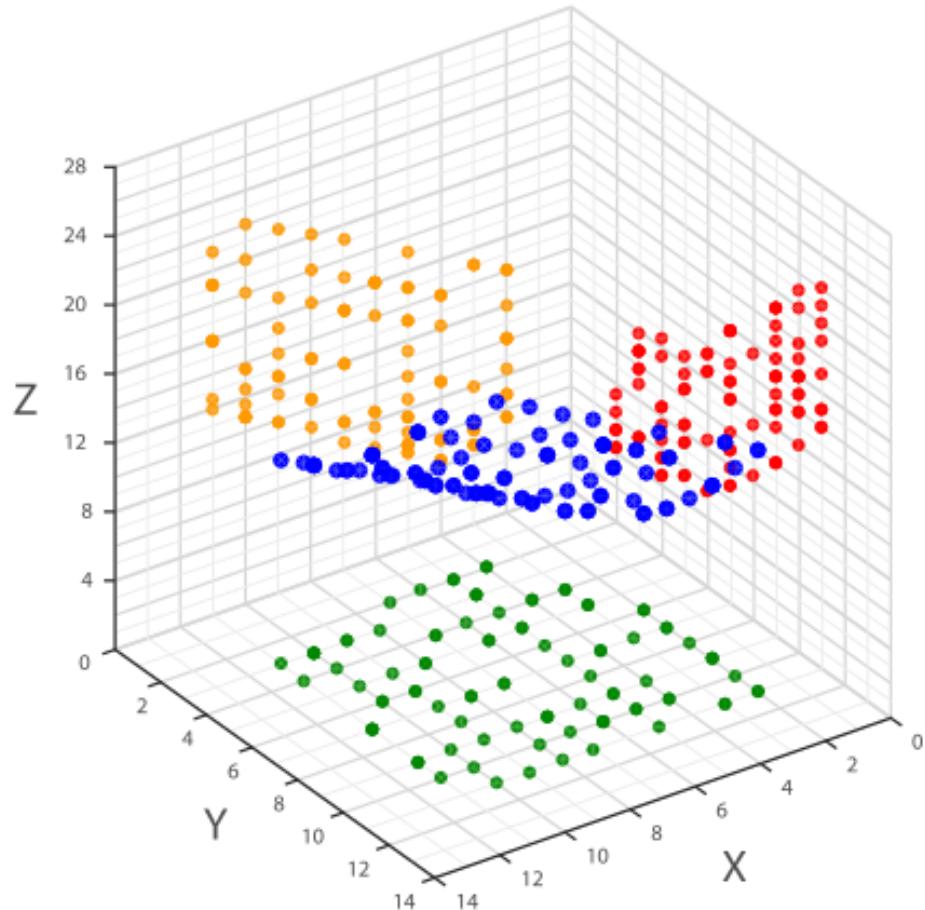
数据可视化

散点图



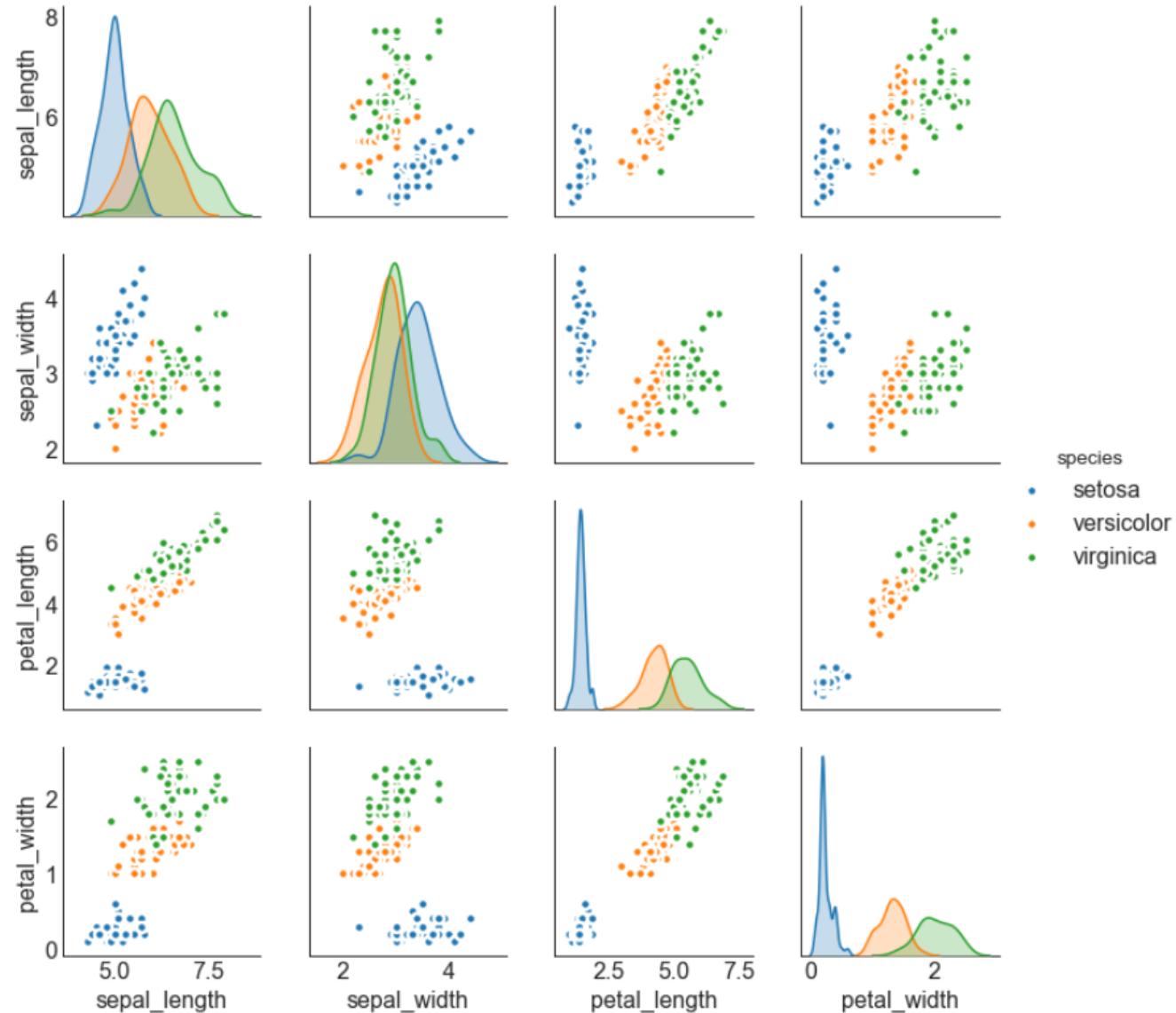
数据可视化

散点图



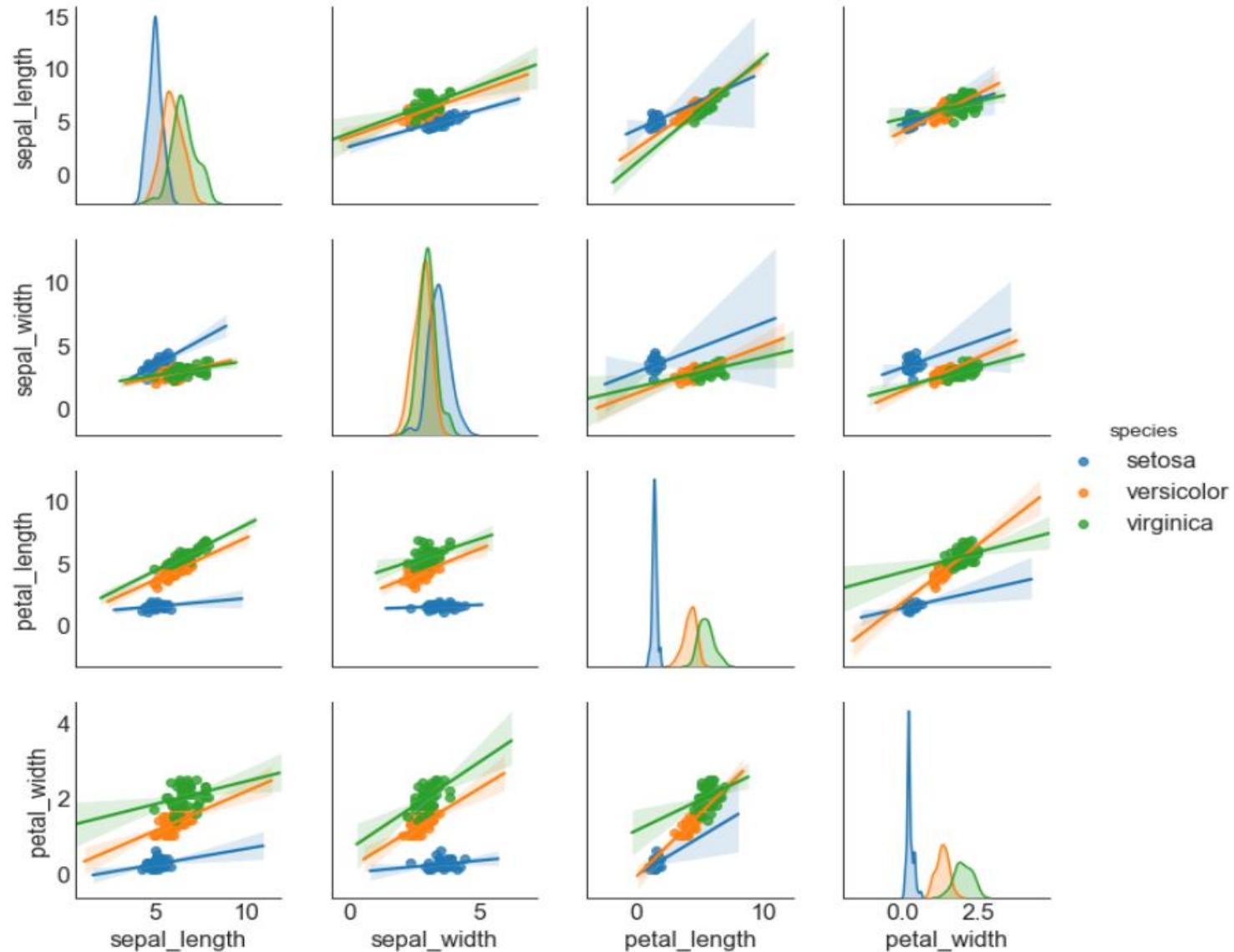
数据可视化

散点图



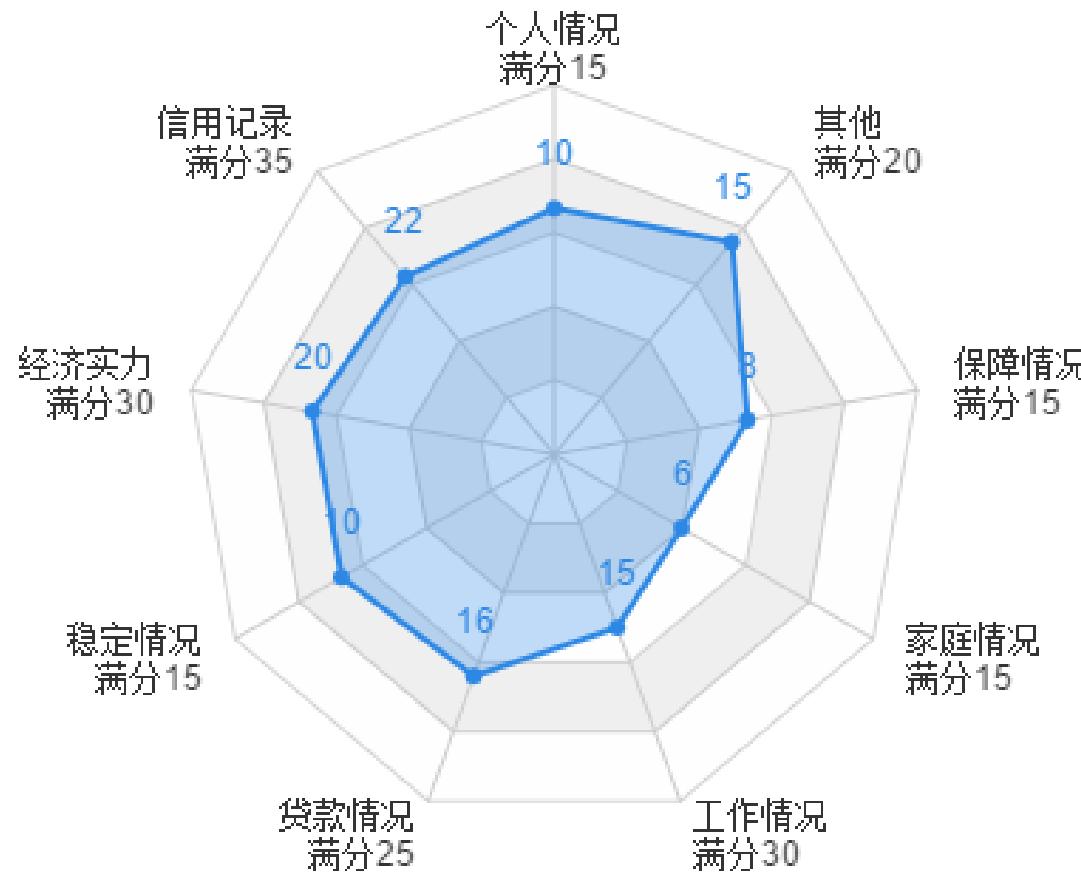
数据可视化

散点图



数据可视化

雷达图



数据可视化

雷达图



车型信息
奥迪Q5L 2020款 40 TFSI 荣享进取型

★★★★☆ 4.41分 | 11人参与



奔驰GLC 2020款 改款 GLC 260 L 4MATIC 动感型

★★★★☆ 4.20分 | 5人参与



凯迪拉克XT5 2020款 改款 28T 四驱领先运动型

★★★★☆ 4.25分 | 5人参与

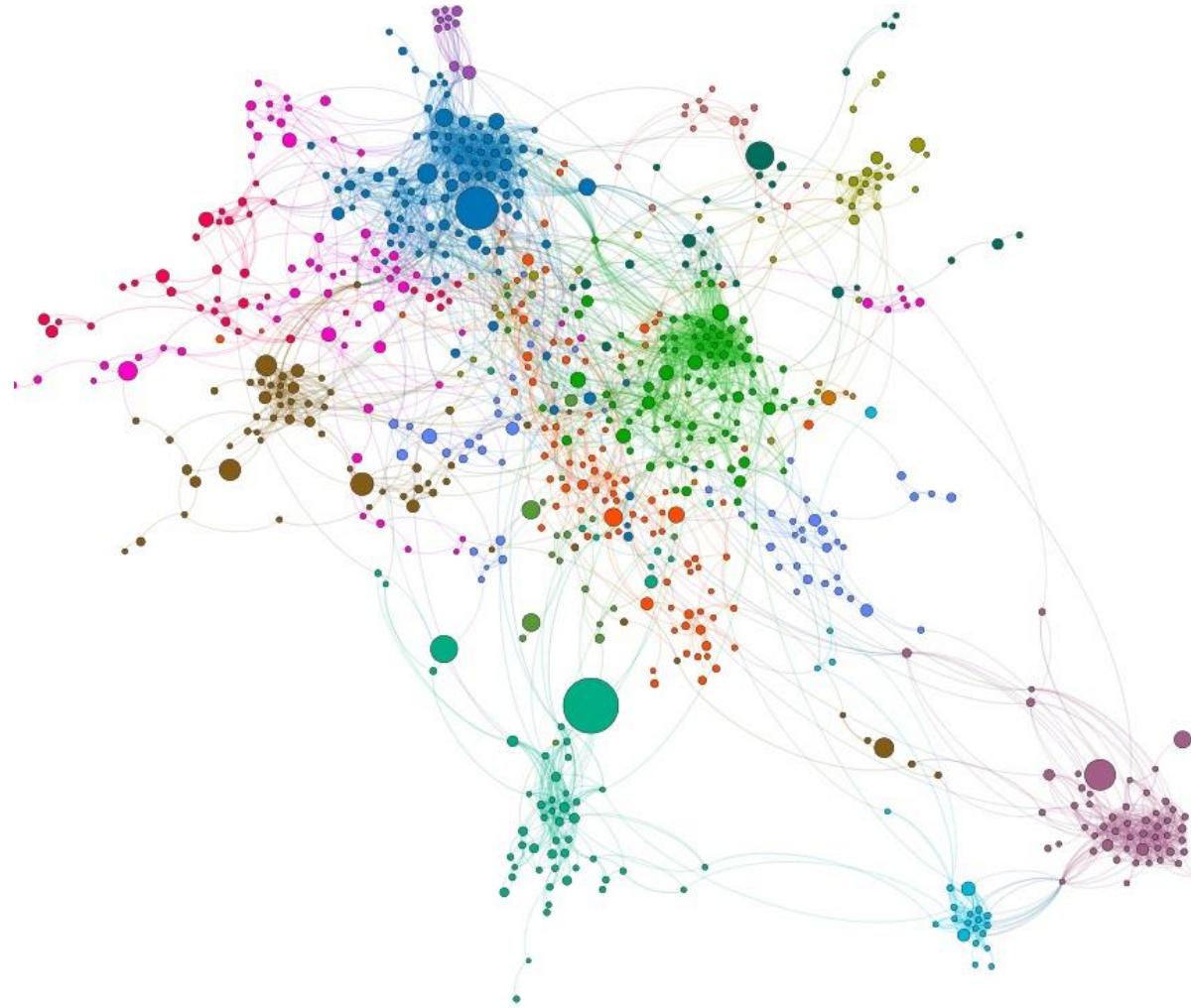


车型信息

口碑评分

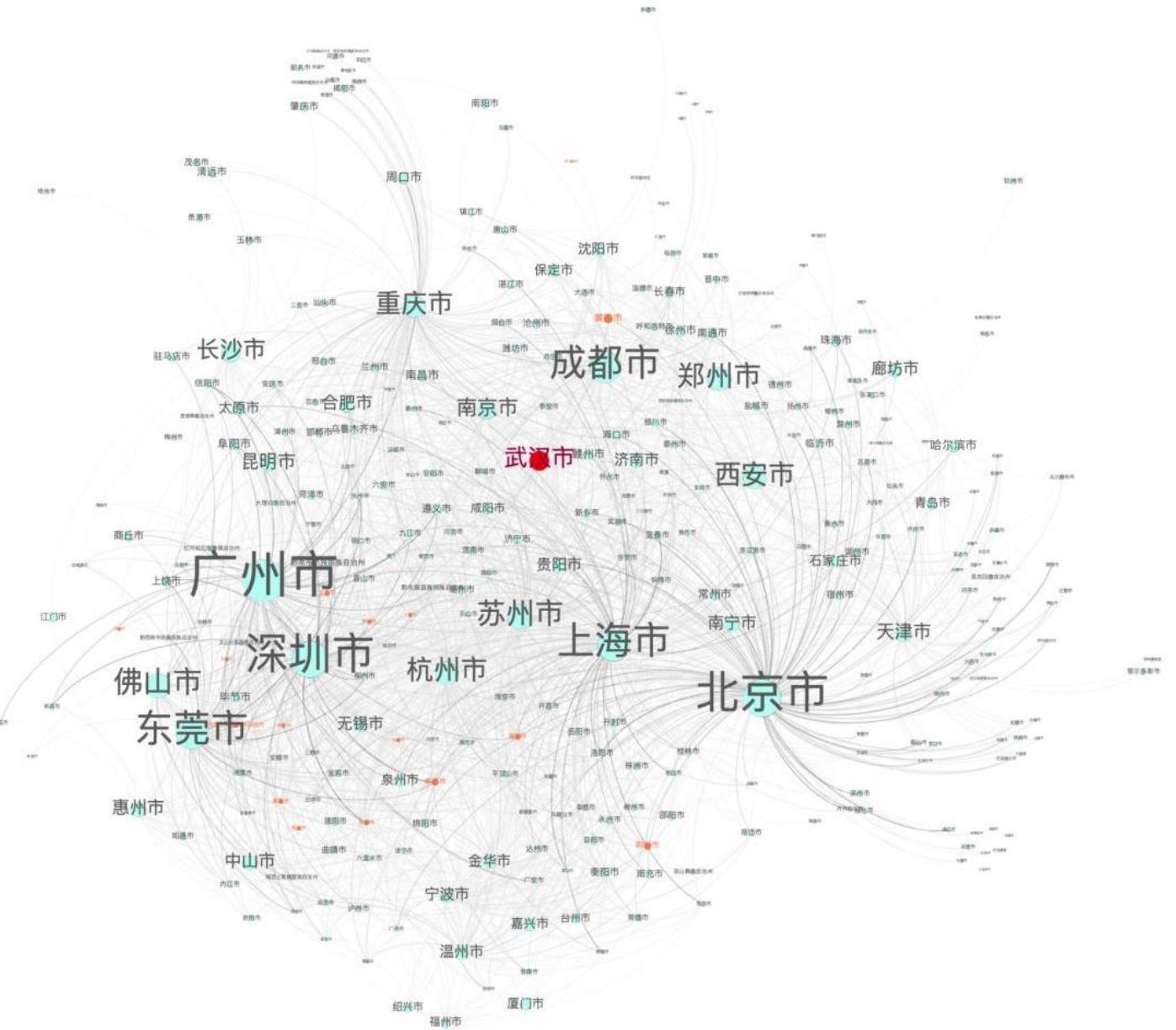
数据可视化

网络图



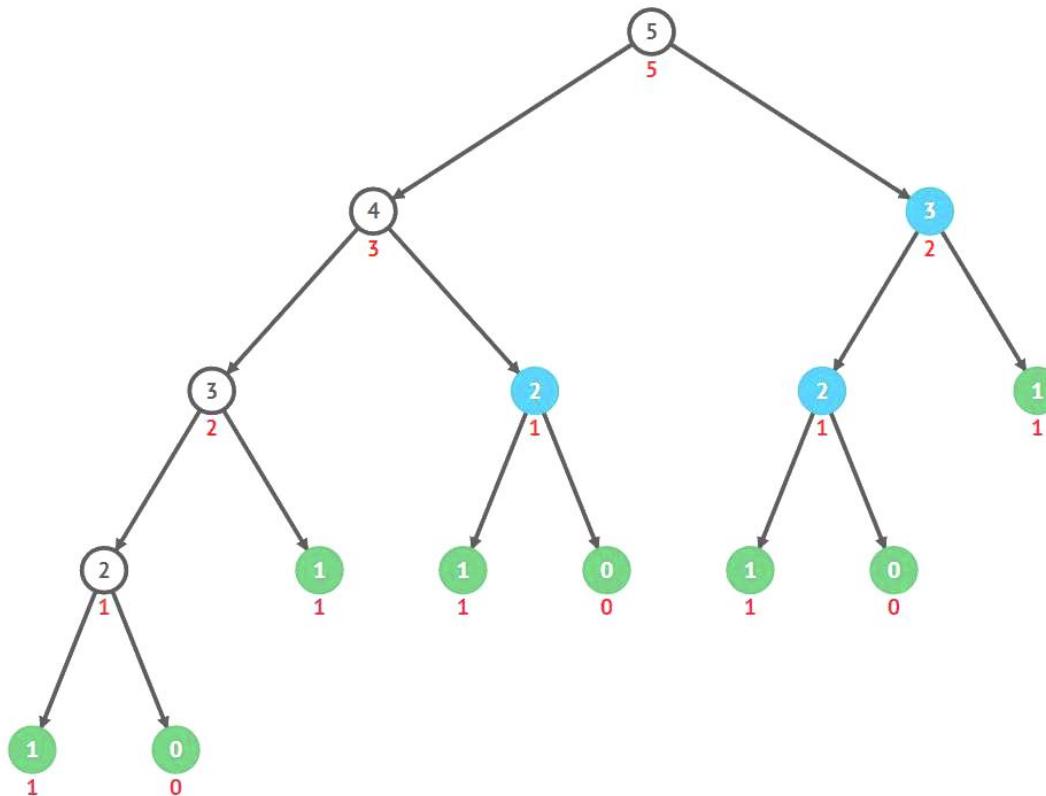
数据可视化

网络图



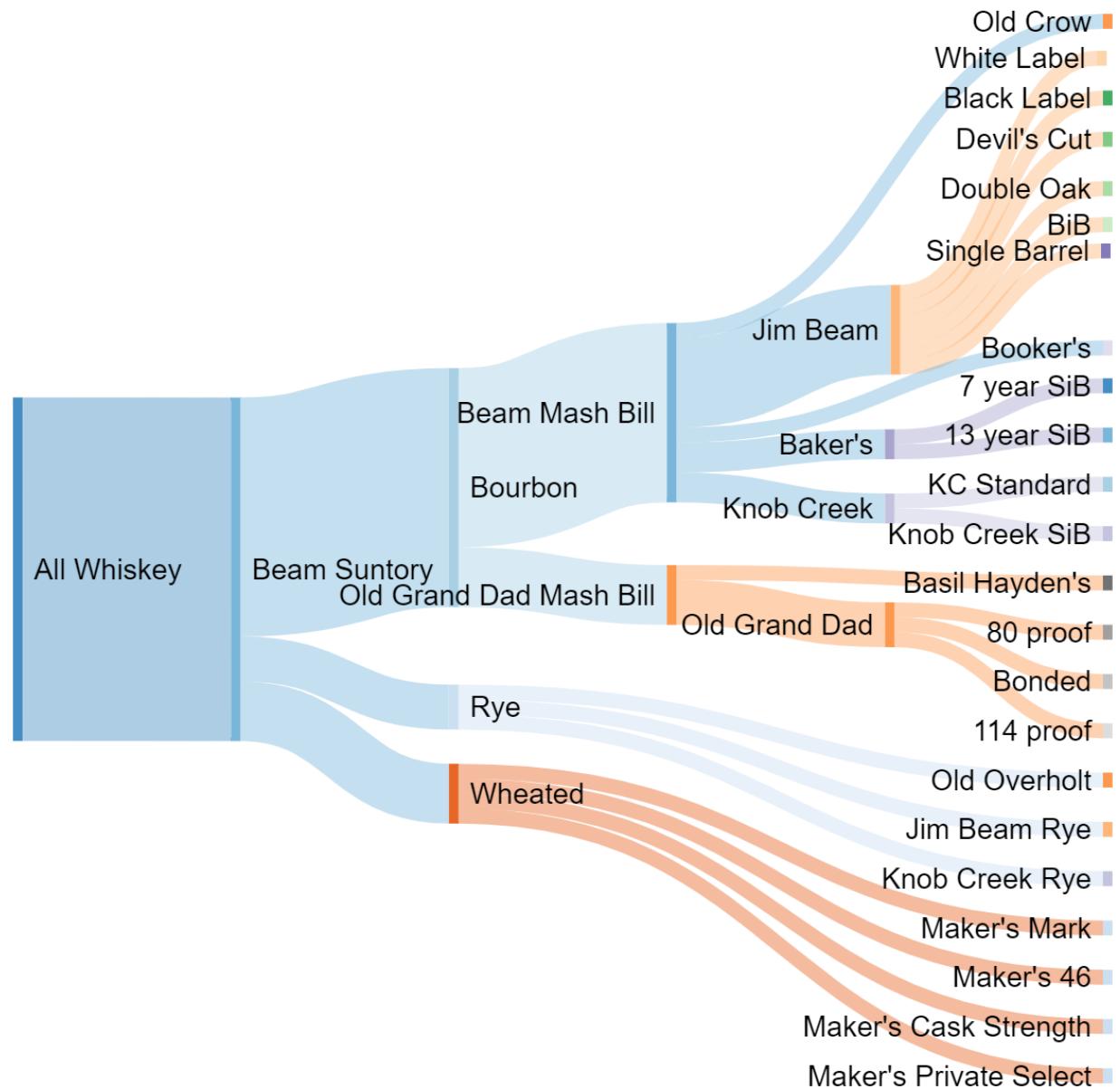
数据可视化

树状图



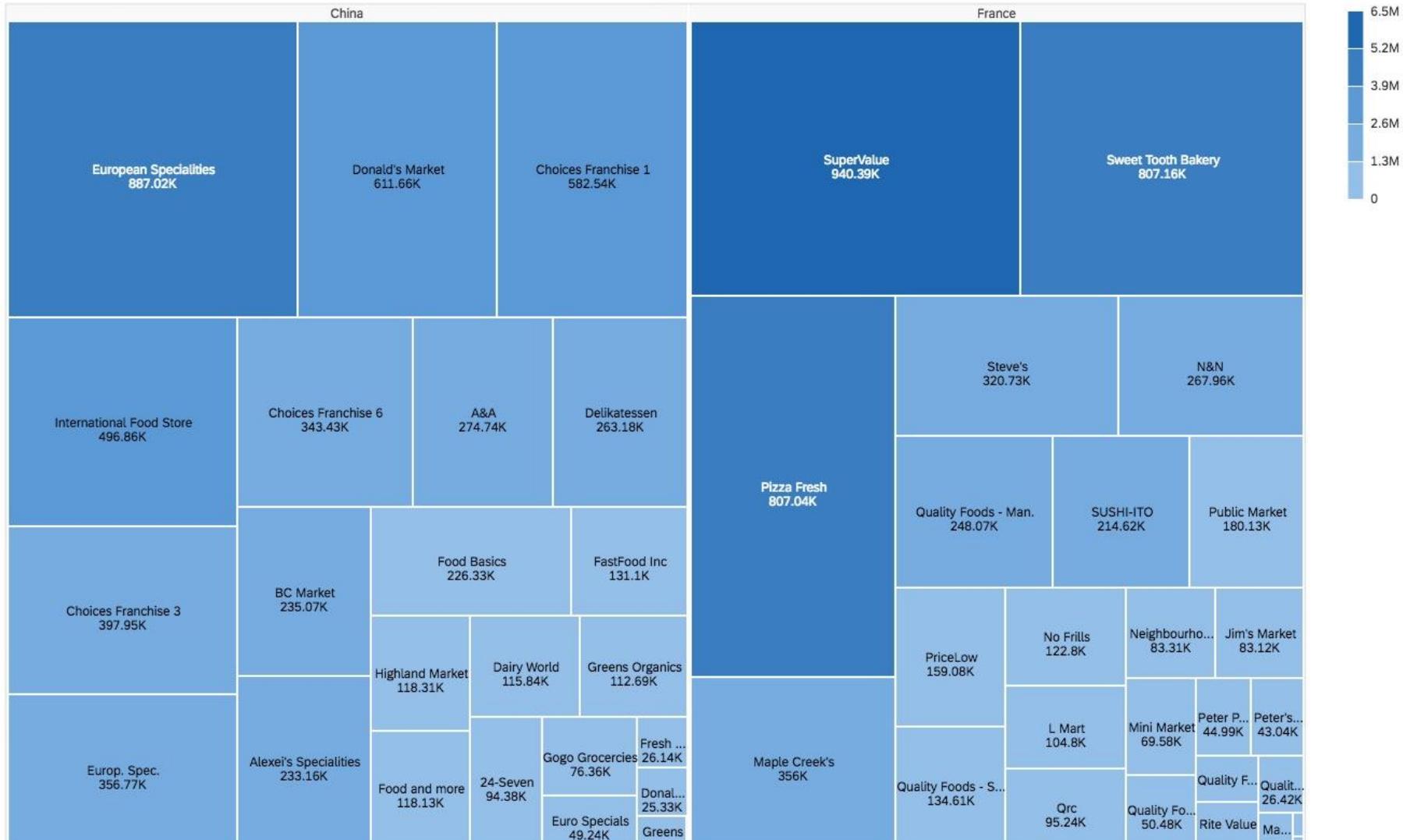
数据可视化

树状图



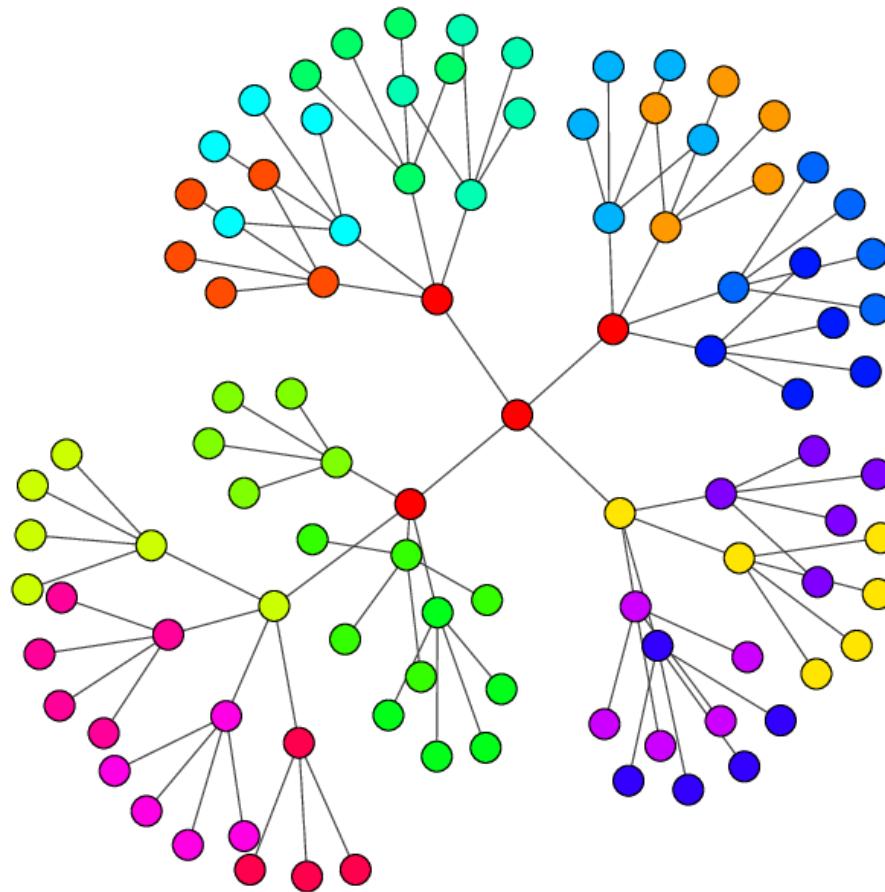
数据可视化

树状图



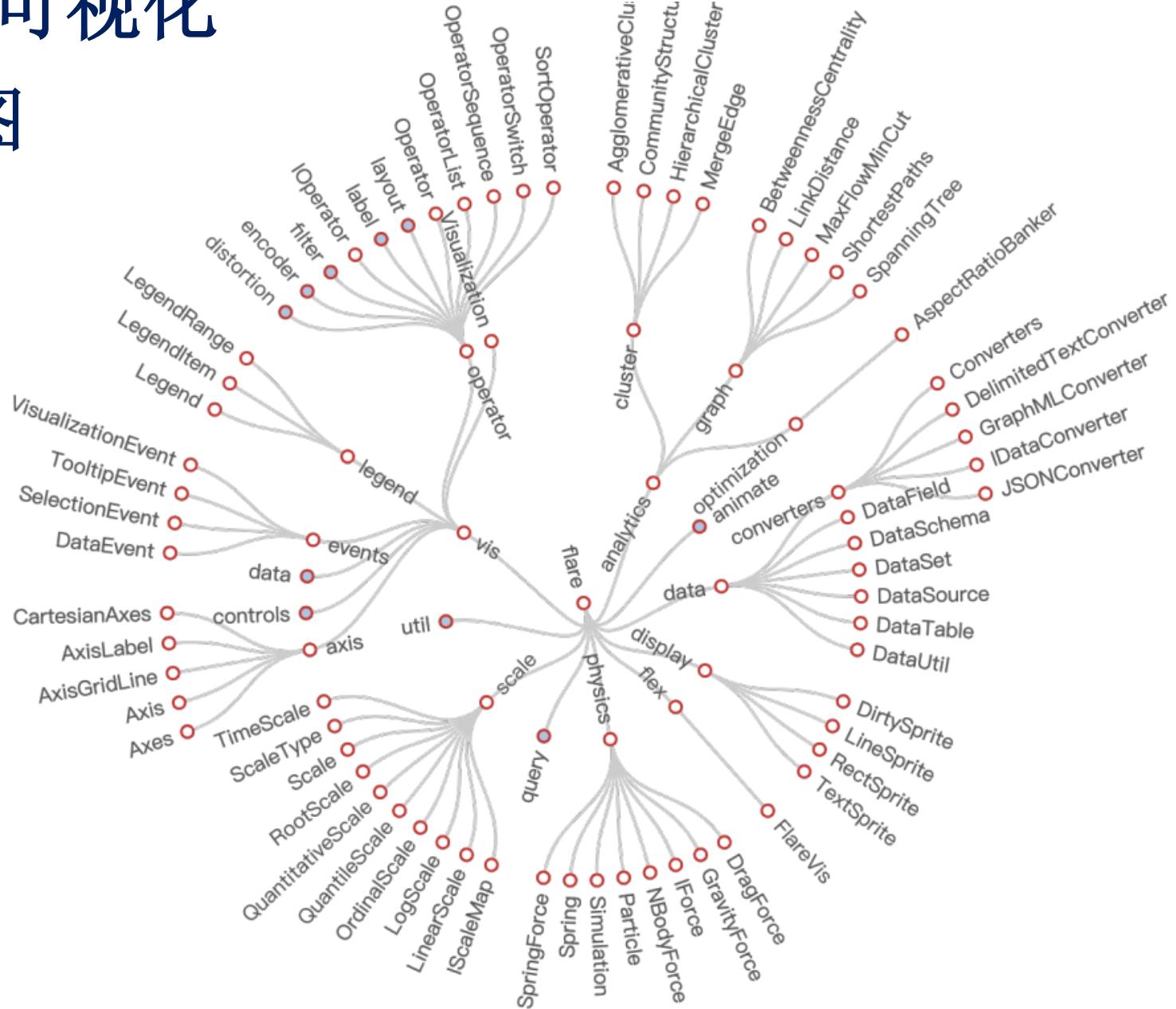
数据可视化

树状图



数据可视化

树状图



数据可视化

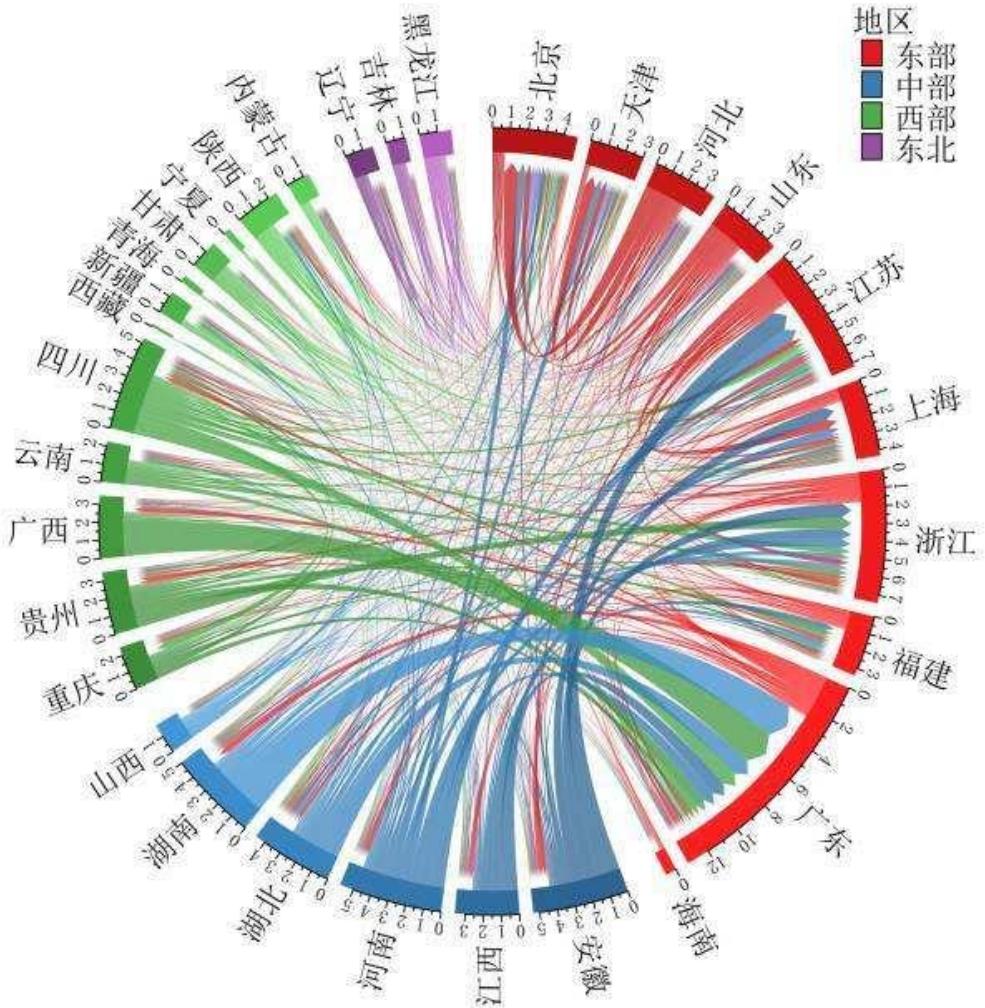
弦图

Chord Diagram



数据可视化

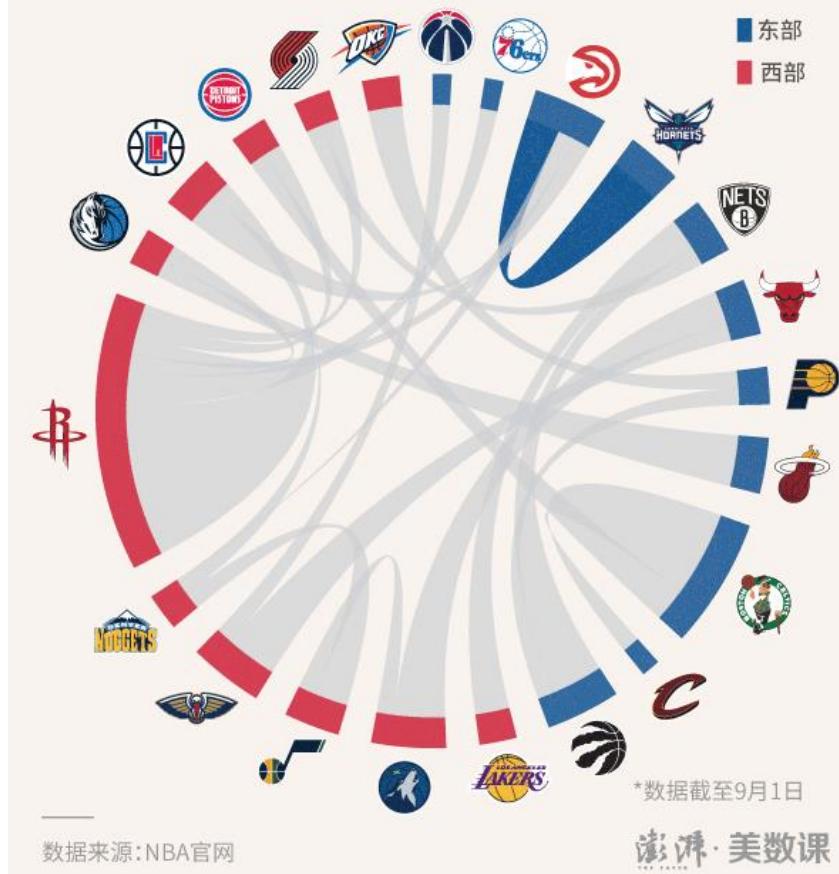
弦图



NBA休赛期球员交易

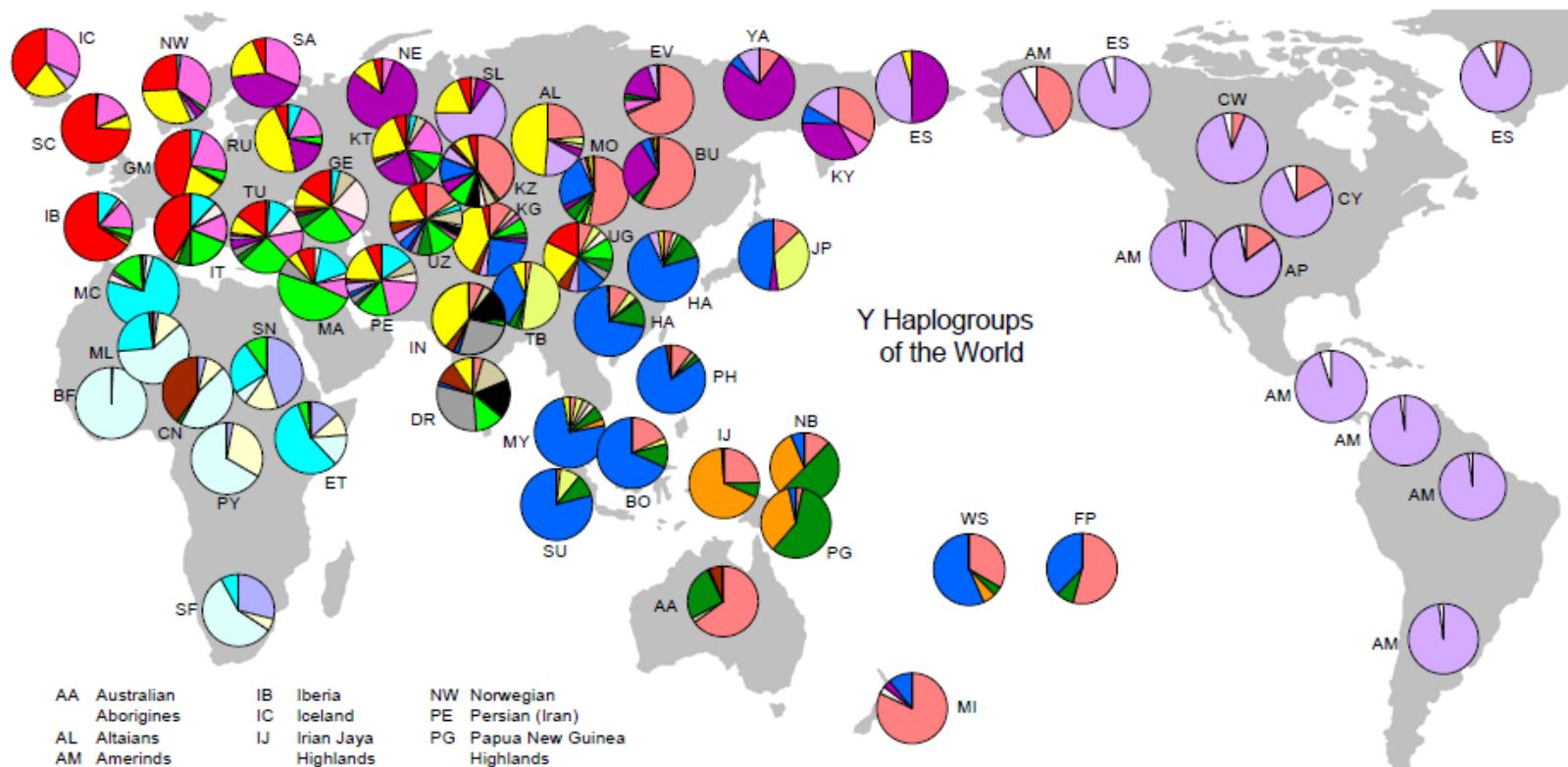
此次交易期，保罗和欧文的交易都体现了以少换多的特点。而意在重建的东部球队则选择引进新人球员，着眼未来选秀权。

6月20日	老鹰	黄蜂
交易细则	①	②
① 德怀特·霍华德	③	③
② 迈尔斯·普拉姆利		
③ 马科·贝里内利		
选秀权	②	②
现金	③	③



数据可视化

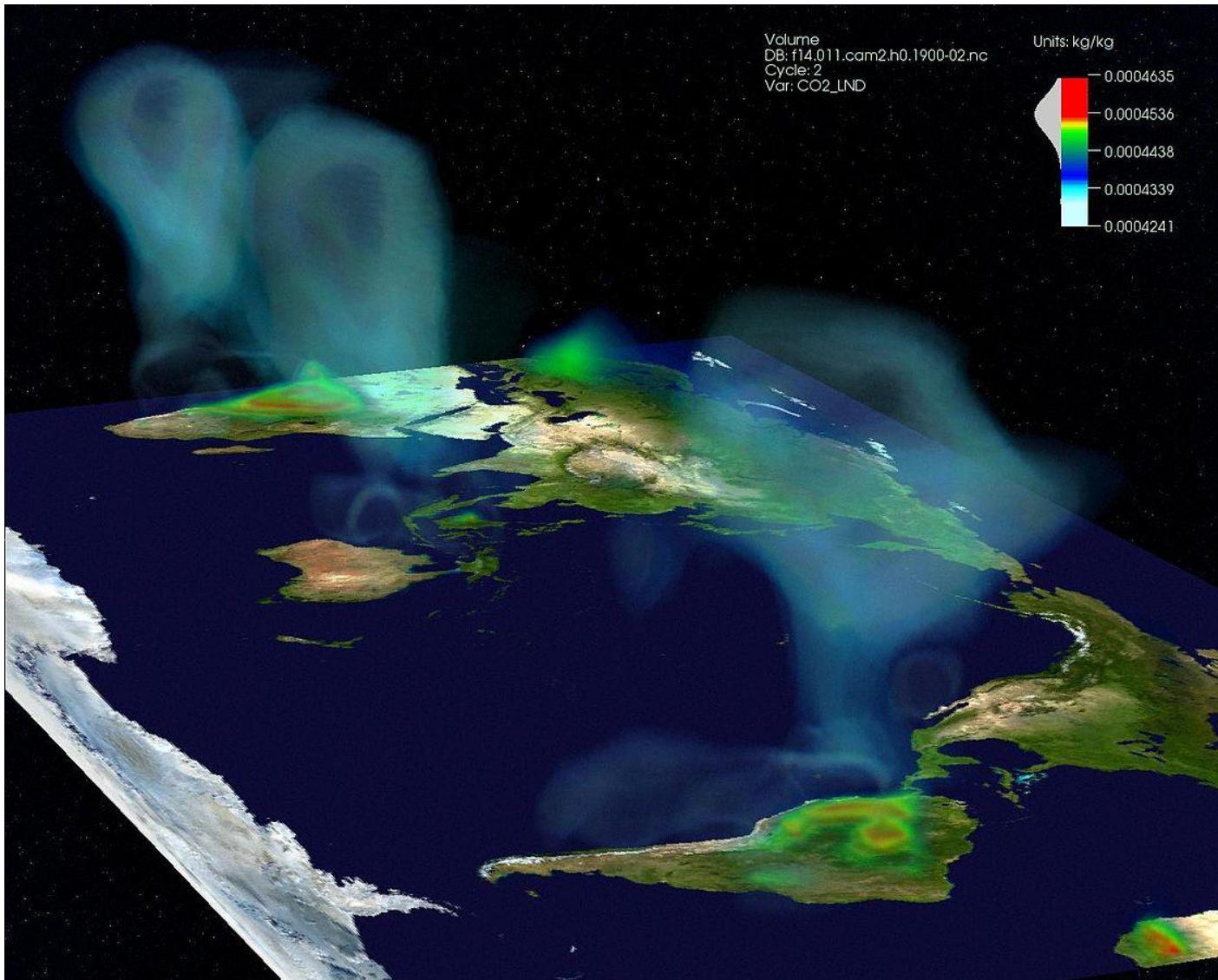
地理图



The data in this map is supposed to represent the situation before the recent European expansion beginning about 1500 AD. In some cases such as some Native American tribes and the Maori this can be done reliably because STR typing was done. In other cases, especially in America, it is guesswork. The "Other" sectors in America indicate this. Native American groups are labeled by language group as Amerind, Na-Dene (N-D), and Eskimo. F, K, L, and P are in some cases "catchall" groups because some researchers did not use enough markers for a full haplotype determination.

数据可视化

地理图



数据可视化

流图-streamgraph

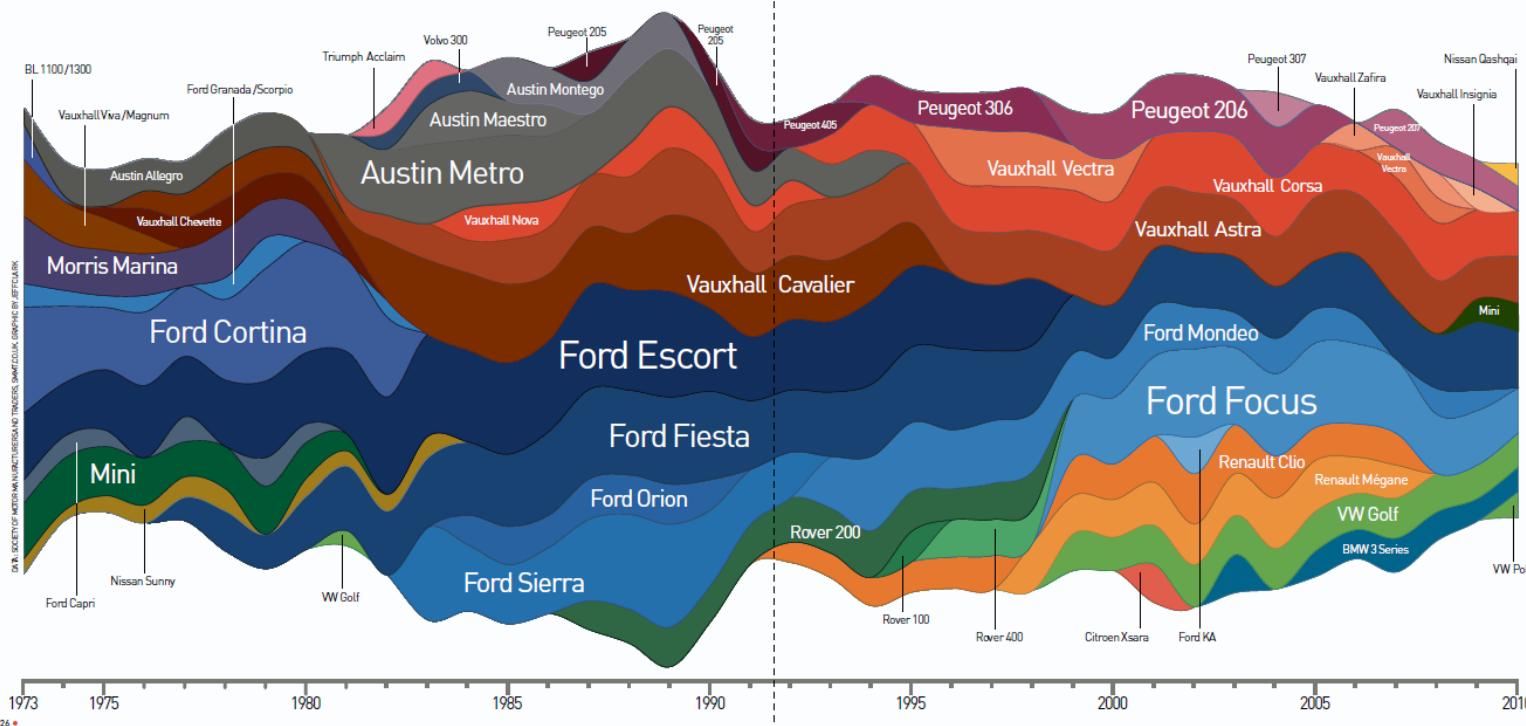
DATAGRAPHIC

MOTORING
SPECIAL

WHO'S BEEN HOGGING THE ROAD SINCE 1973?

The answer is mostly Ford – as our streamgraph charting the fortunes of the ten best-selling cars in the UK for each of the past 37 years reveals

Have you driven a Ford lately? Probably. As you can see from our graphic, the iconic blue oval logo has been a constant presence in the best-selling car charts for decades. The thickness of each bar follows the annual sales for that car, combining to paint a picture of Britain's

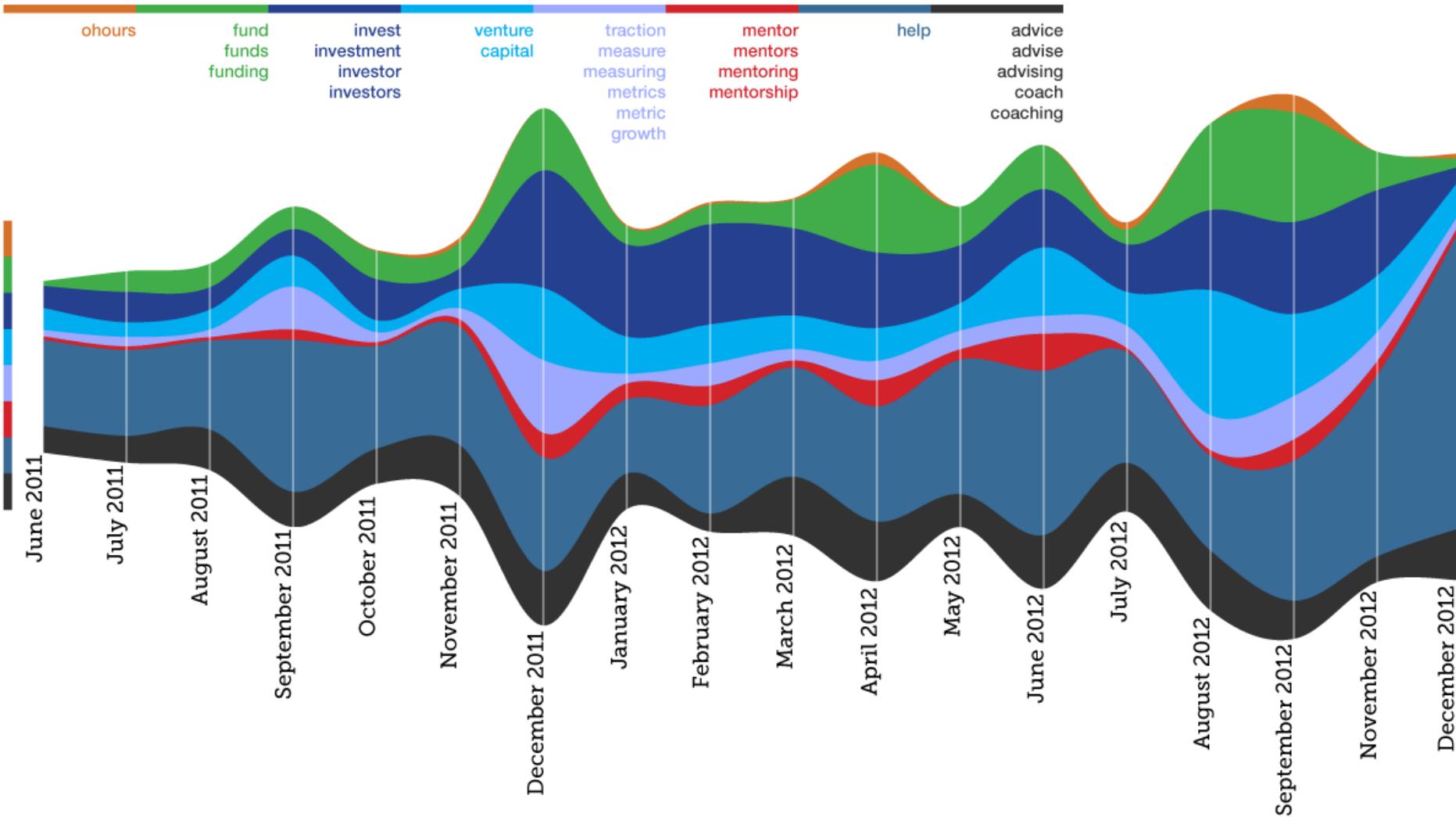


数据可视化

流图-streamgraph

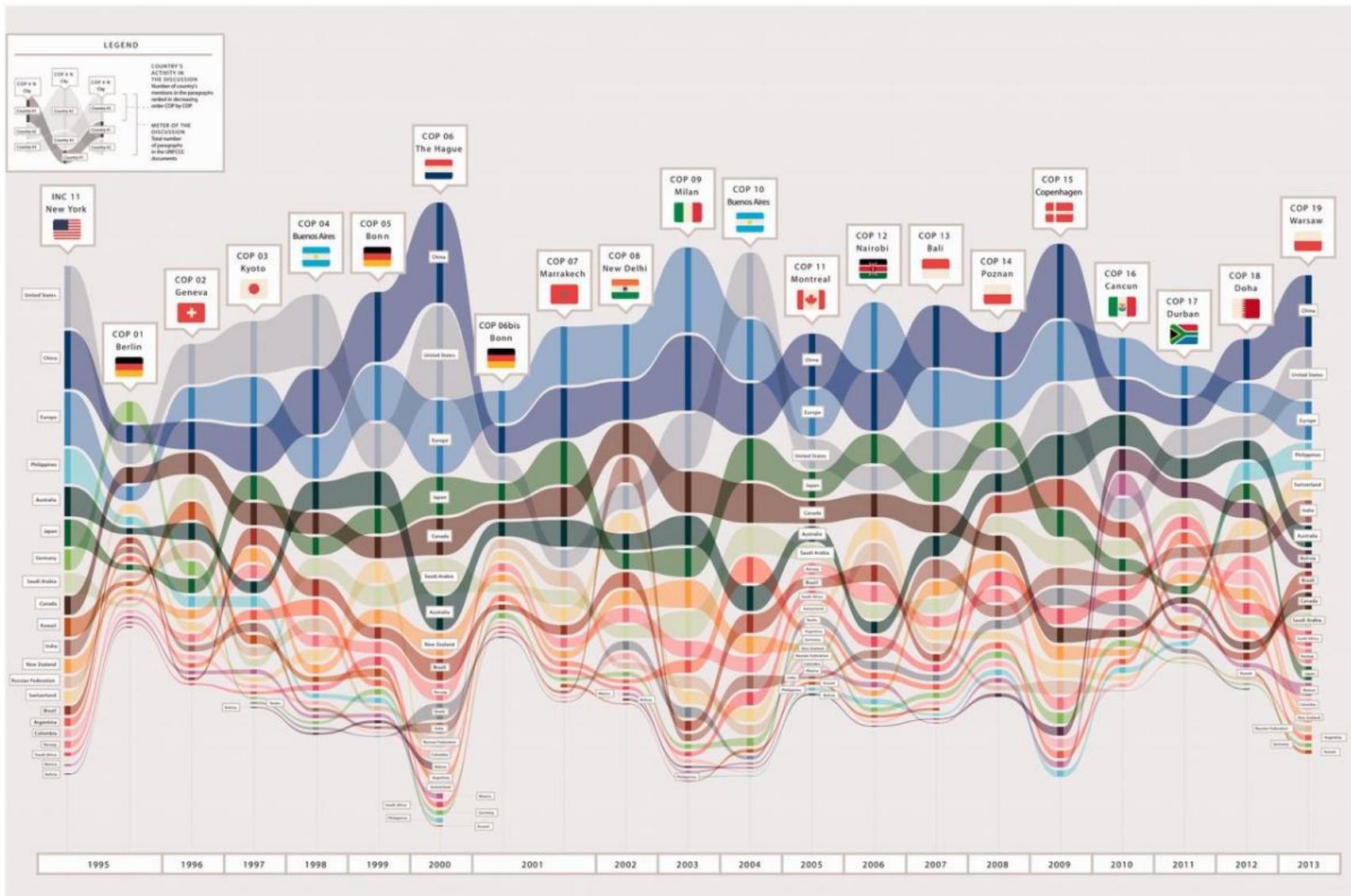
PSL ListServ Streamgraph

Visualized by Ben Farahmand || www.benfarahmand.com



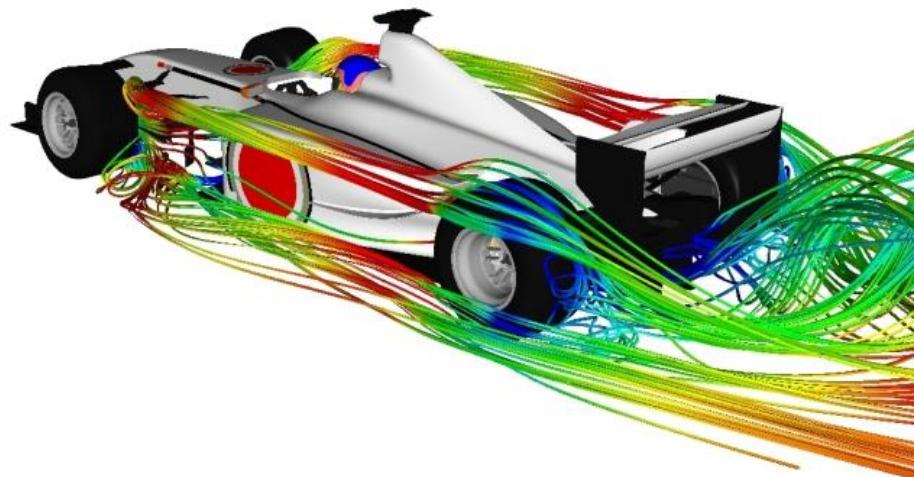
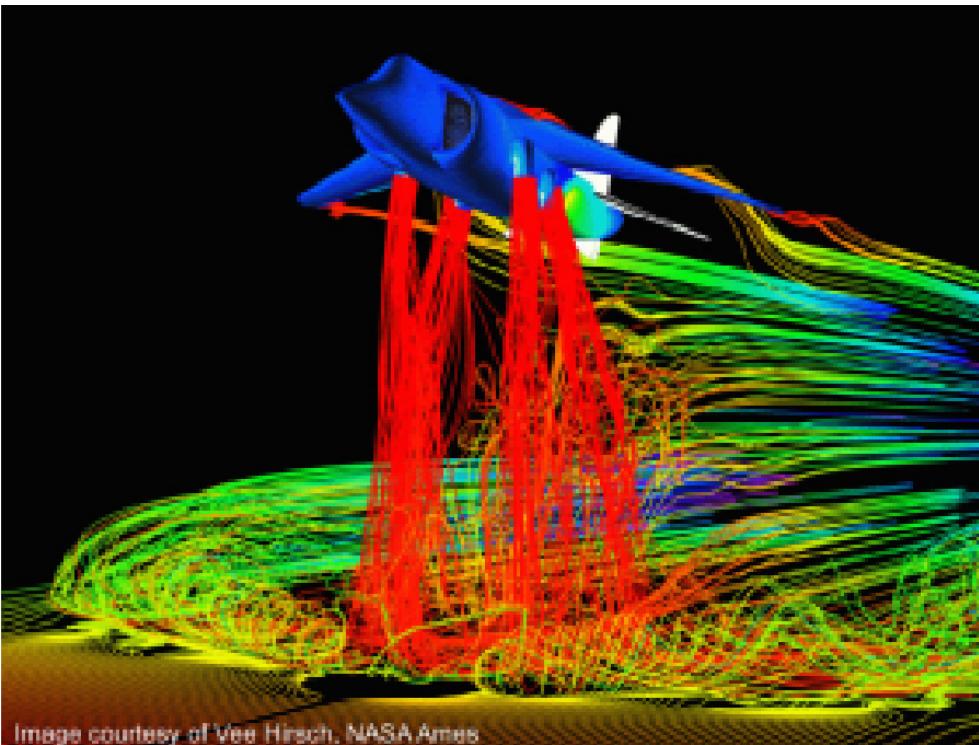
数据可视化

流图-streamgraph



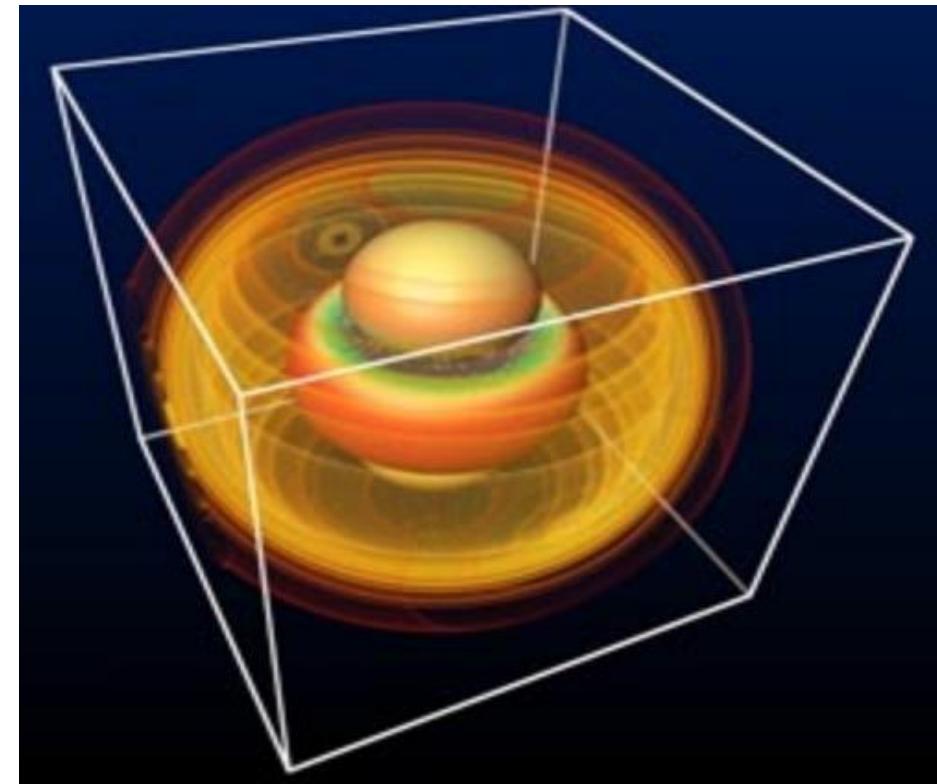
数据可视化

其他



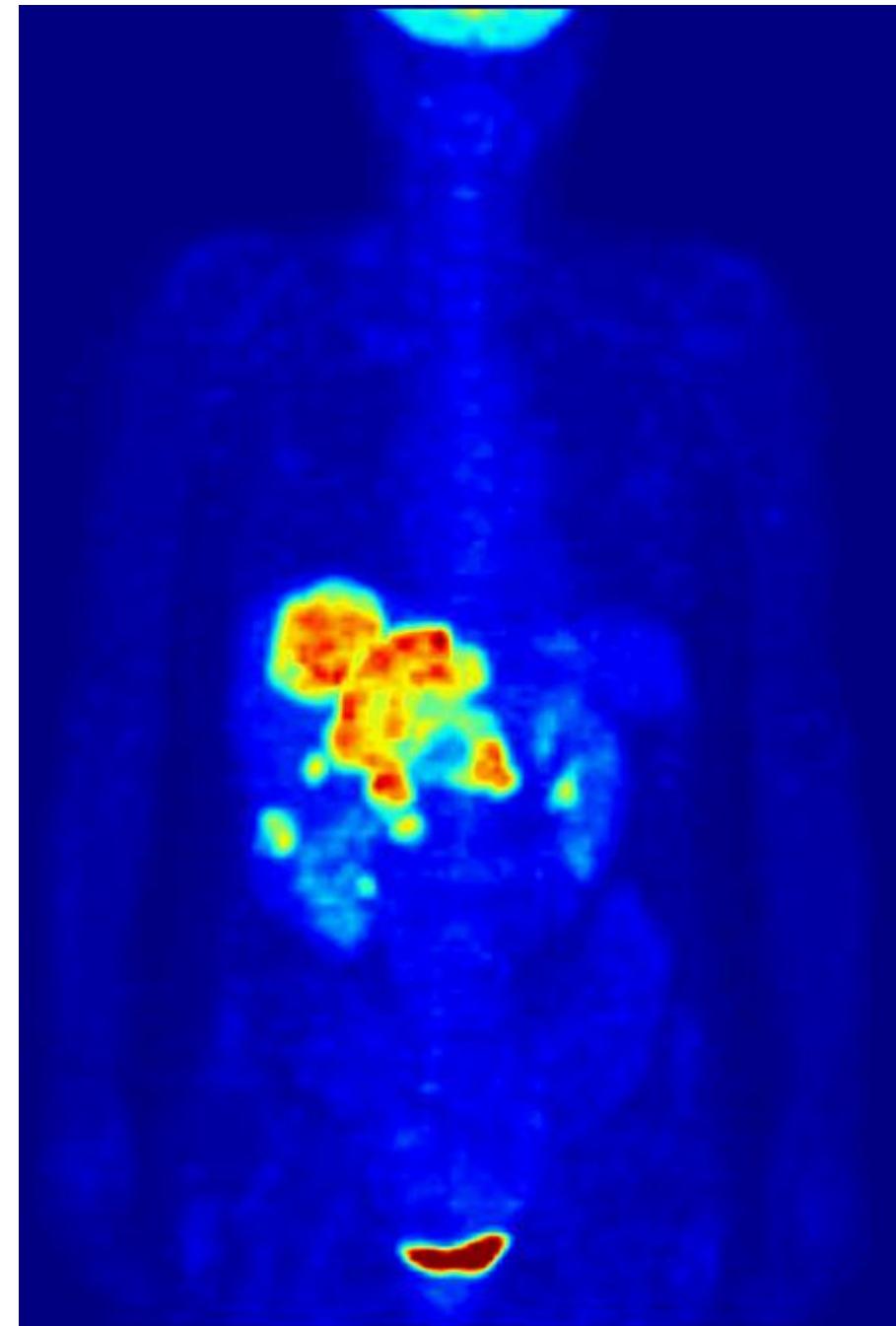
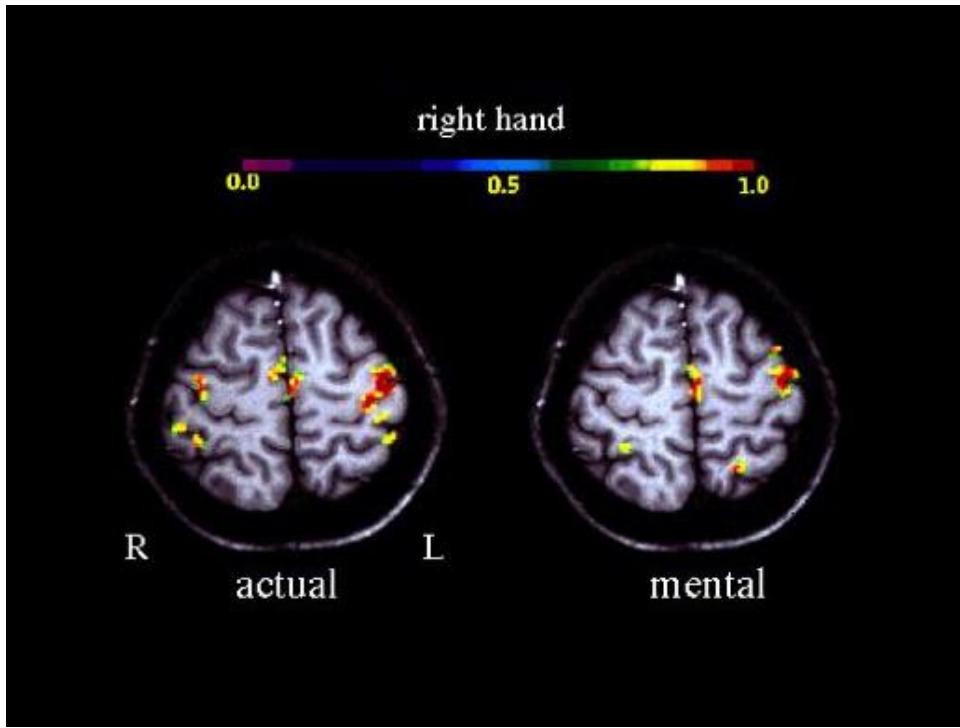
数据可视化

其他



数据可视化

其他



数据可视化

其他

