Data Visualization tools for the Digital Humanities

Lorenzo Soligo - Ca' Foscari University of Venice
Master's Degree in Digital Humanities 2020 - Lesson 3
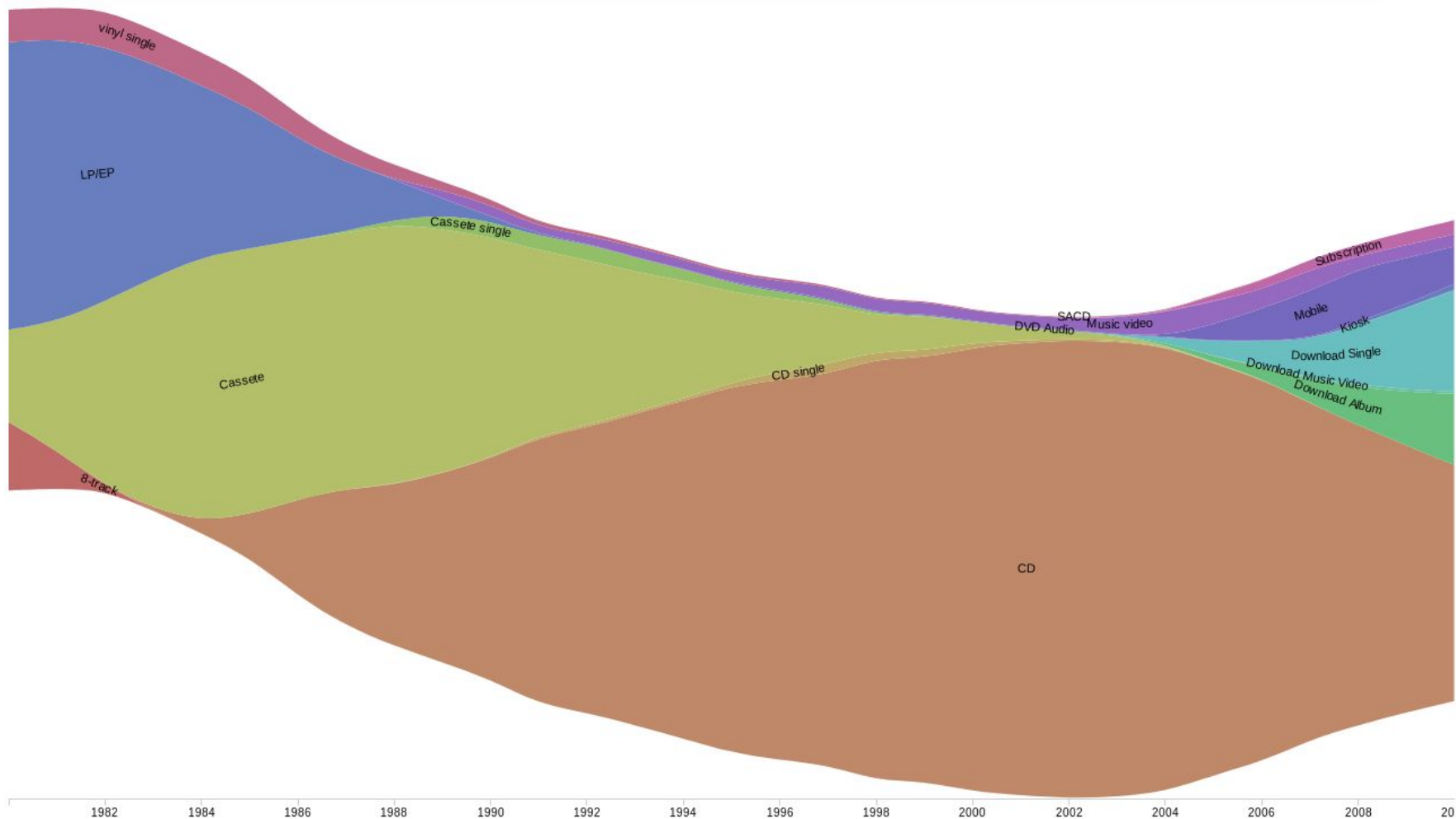
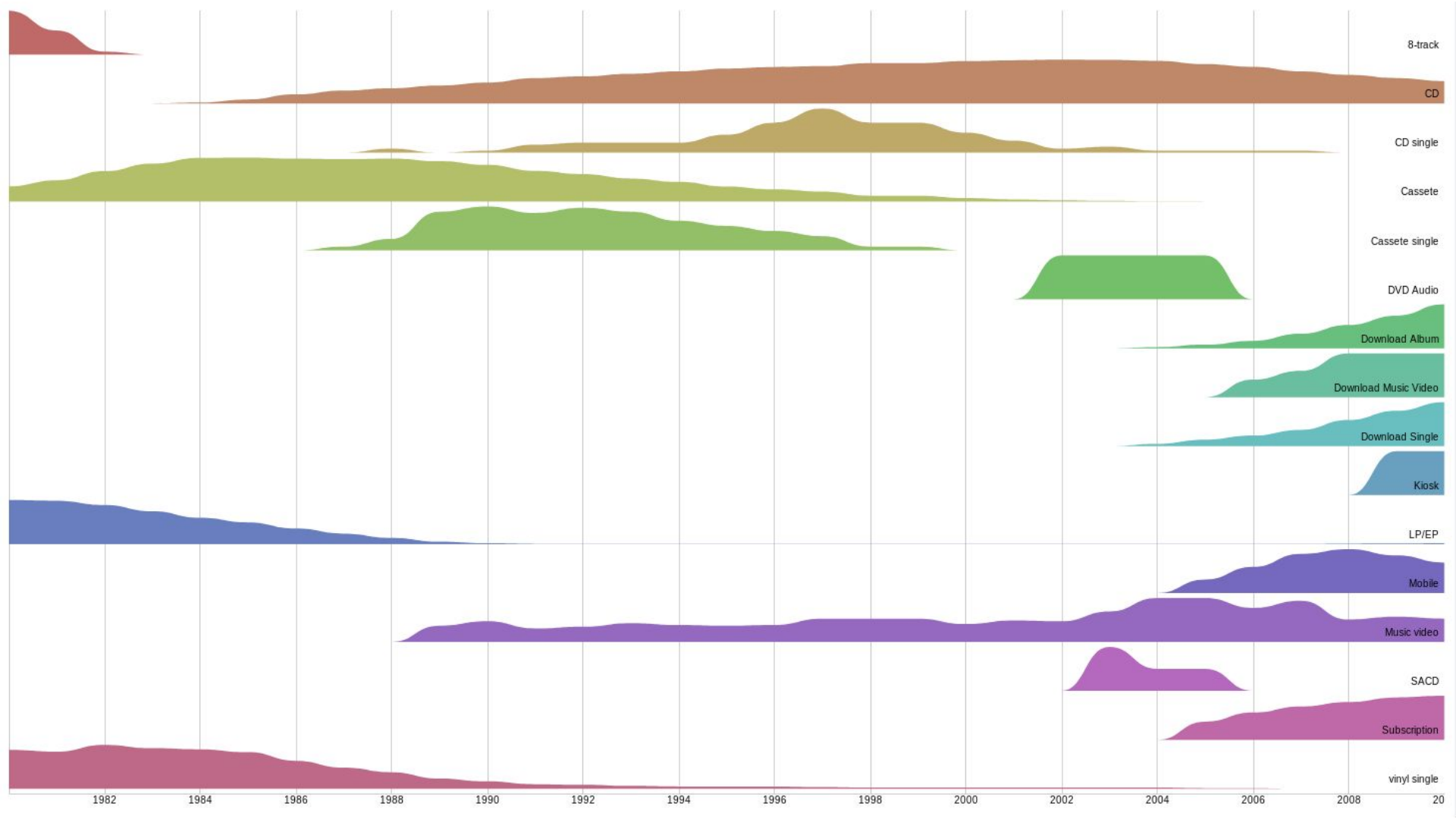# Some datasets

[Official COVID-19 datasets](#)

First example: Music Industry

- Let's explore how the distribution of music evolved throughout the years

- X = Year
- Y = Market Share
- Color = Media

- What about a streamgraph? An area graph?

vinyl single

LP/EP

Cassete single

Cassete

8-track

CD single

DVD Audio

SACD

Music video

CD

Download Single

Download Music Video

Download Album

Subscription

Mobile

Kiosk

1982 1984 1986 1988 1990 1992 1994 1996 1998 2000 2002 2004 2006 2008 20

| | 1982 | 1984 | 1986 | 1988 | 1990 | 1992 | 1994 | 1996 | 1998 | 2000 | 2002 | 2004 | 2006 | 2008 | 20 |

8-track
CD
CD single
Cassete
Cassete single
DVD Audio
Download Album
Download Music Video
Download Single
Kiosk
LP/EP
Mobile
Music video
SACD
Subscription
vinyl single

CARES Act: $2,000B

- Public Health: $153.5B
- Student Loans/Other*: $43.7B
- Individuals*: $560B
  - Cash Payments*: $300B
  - Extra Unemployment Payments*: $260B
- Large Corporations: $500B
  - National Security: $17B
  - Airlines: $58B
    - Passenger - Wages/Benefits: $25B
    - Cargo - Wages/Benefits: $4B
    - Contractors: $3B
    - Airlines - Other: $26B
  - Large Corporations - Other: $425B
- Small Business: $377B
  - Grants: $10B
  - New Loans: $350B
  - Relief for Existing Loans: $17B
- State & Local Gov't: $339.8B
  - COVID-19 Response: $274B
  - Block Grants: $5B
  - K-12 Schools: $13B
  - Higher Education: $14B
  - Family Programs: $5.3B
  - Governments - Other: $28.5B
- Safety Net: $26B
  - Child Nutrition: $8.8B
  - SNAP: $15.5B
  - Food Banks: $0.45B
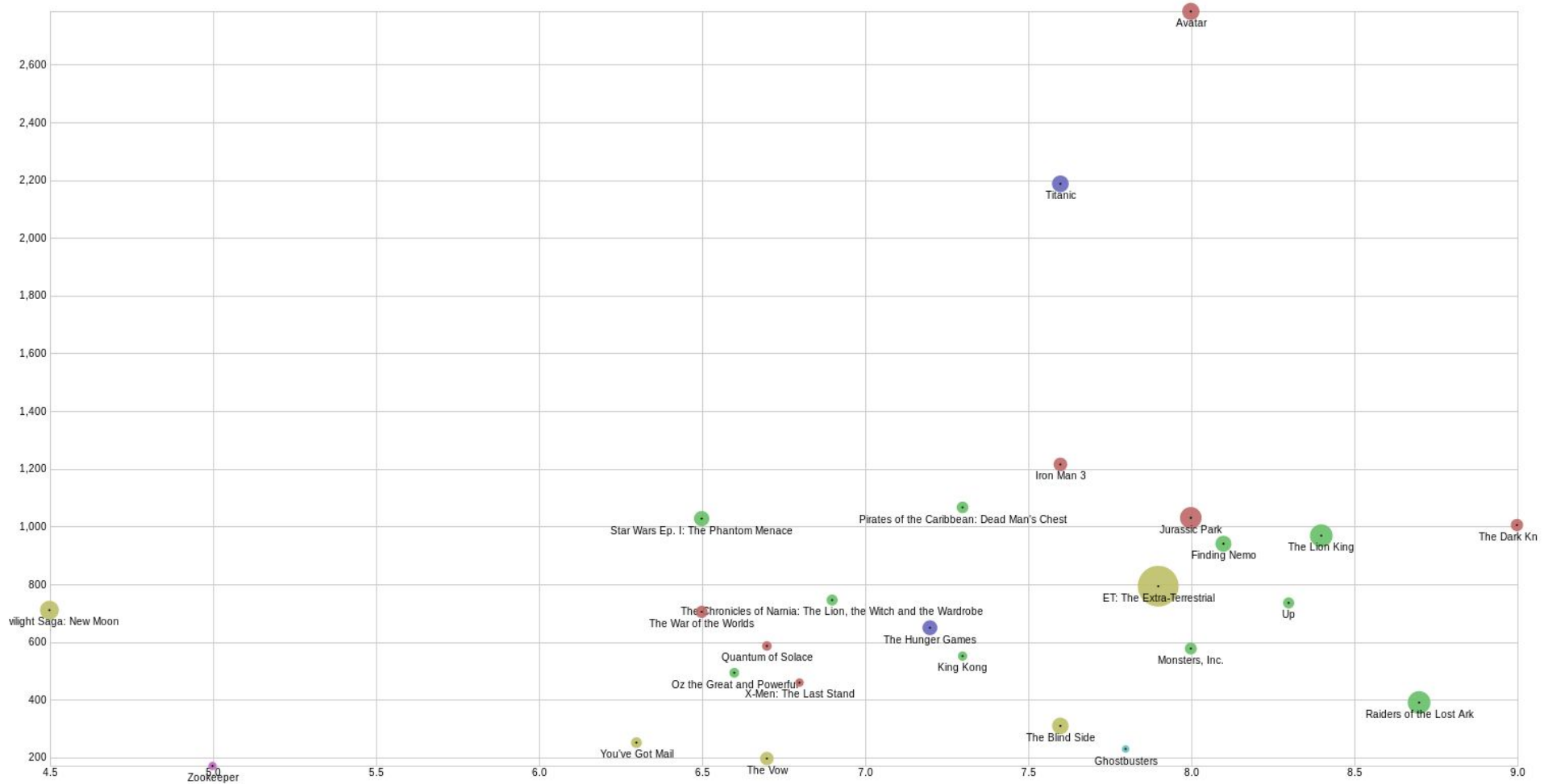 - Safety Net - Other: $1.25B

*Estimated

Second example: Titanic's passengers

- Alluvial Diagram
- Let's try and see whether people were saved unconditionally without caring about their class
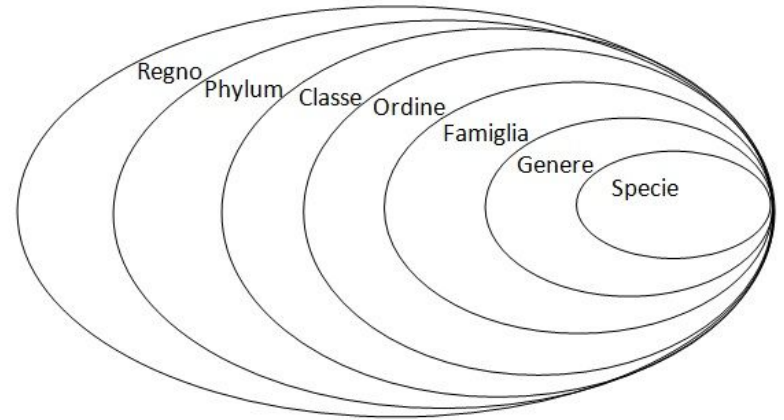
- Steps: Class, Survival
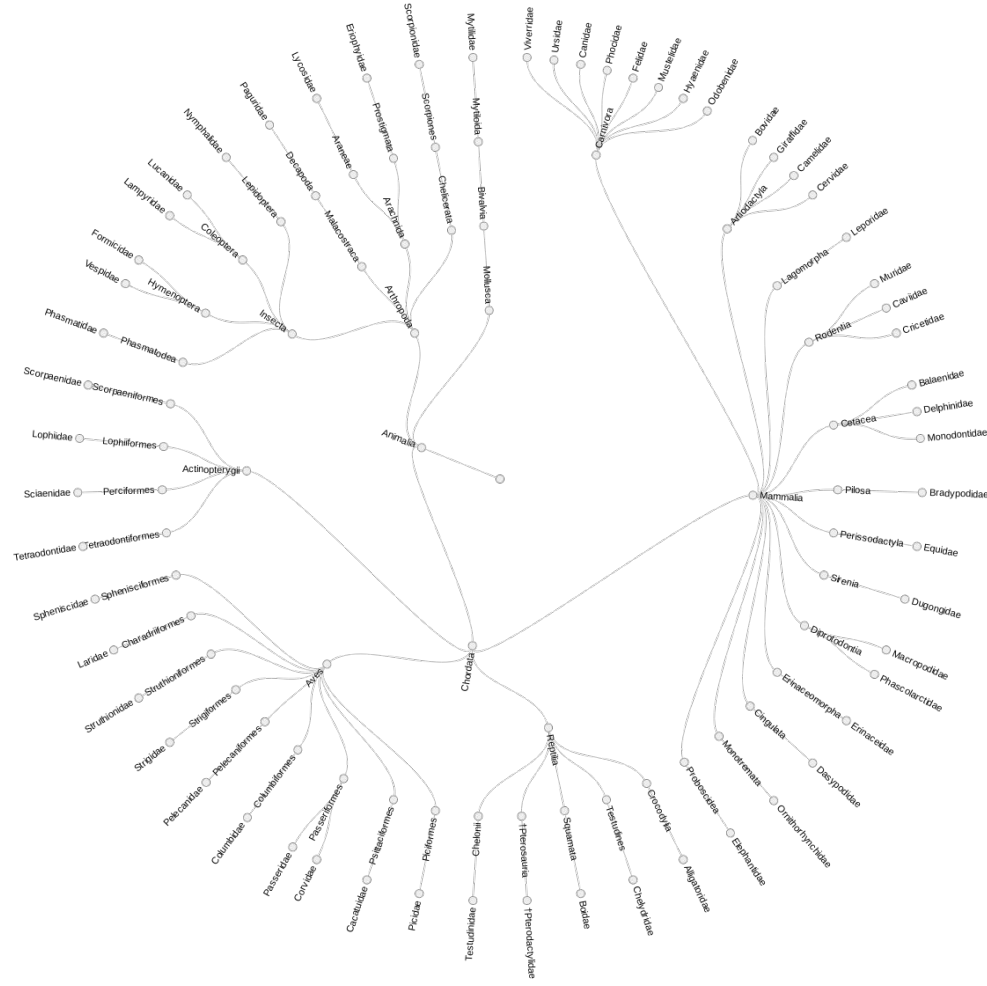- Size: Age

Third example: Movies

- Scatterplot

- X = IMDB rating
- Y = Box Office
- Size = ROI
- Color = Genre
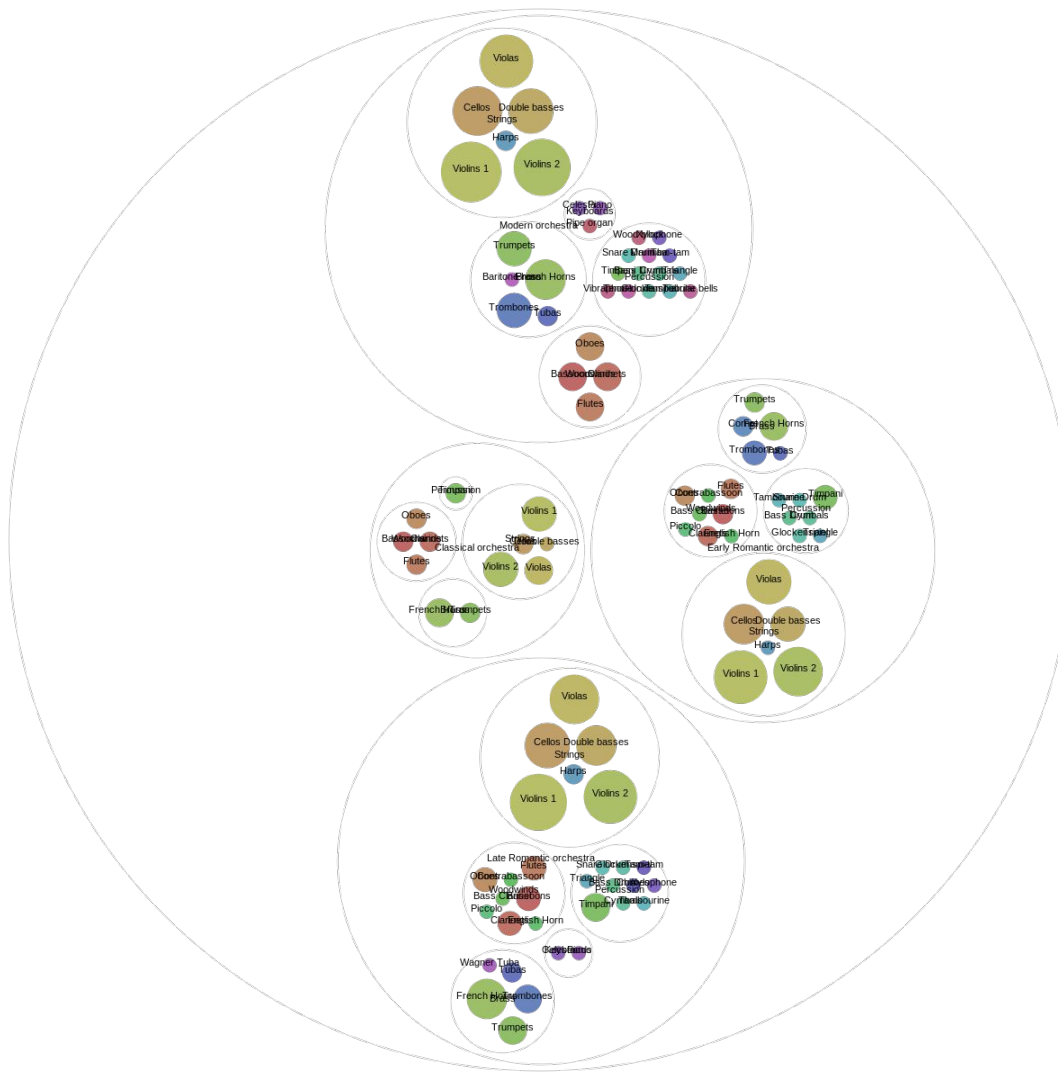- Label = Movie

Fourth example: Animal Kingdom

- Circular Dendrogram

Fifth example: Orchestra

- Circle packing
- Hierarchy: Orchestra type, Group, Instrument
- Size: number
- Color: instrument
- Label: instrument

Modern orchestra
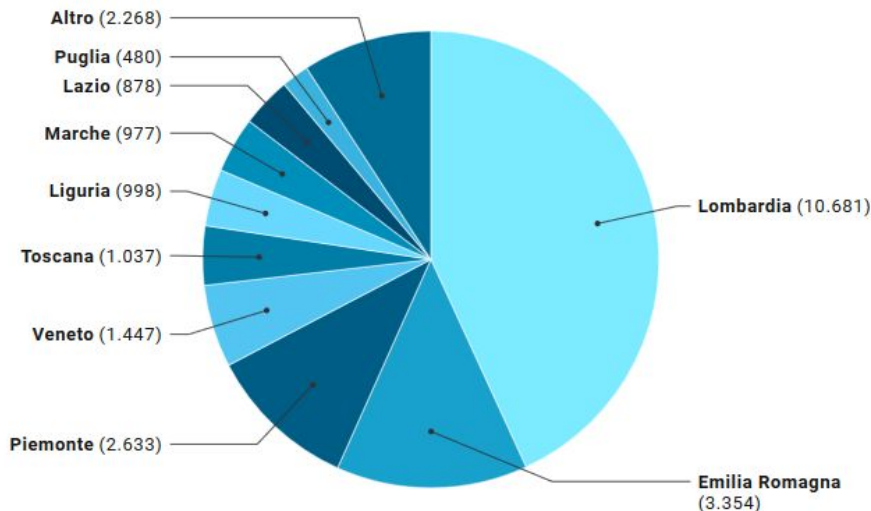
Violas
Cellos   Double basses
Strings
Harps
Violins 1   Violins 2

Celesta   Piano
Keyboards
Pipe organ
Woodblock   Xylophone
Snare Drum   Tam-tam
Triangle
Timpani   Cymbals   Bass Drum
Percussion
Vibraphone   Tubular bells   Tambourine

Trumpets
Baritone   French Horns
Brass
Trombones   Tubas

Oboes
Bassoons   Clarinets
Woodwinds
Flutes

Classical orchestra

Timpani
Oboes
Clarinets
Bass   Bassoons
Flutes
Strings
Violins 1
Double basses
Violins 2   Violas
French Horns   Brass   Trumpets

Early Romantic orchestra

Trumpets
Cornets   French Horns
Brass
Trombones   Tubas

Flutes
Oboes   Contrabassoon
Bassoons
Bass   Clarinets
Piccolo
Woodwinds   English Horn
Timpani
Snare Drum   Tam-tam
Percussion
Cymbals   Bass Drum
Glockenspiel   Triangle

Violas
Cellos   Double basses
Strings
Harps
Violins 1   Violins 2

Late Romantic orchestra

Violas
Cellos   Double basses
Strings
Harps
Violins 1   Violins 2

Flutes
Oboes   Contrabassoon
Bassoons
Woodwinds
Bass Clarinet
Piccolo
Clarinets   English Horn

Snare Drum   Tam-tam
Triangle   Xylophone
Glockenspiel
Percussion
Timpani   Cymbals   Tambourine

Wagner Tuba
Tubas
French Horns   Trombones
Brass
Trumpets
Cornets

Flourish

Flourish

- https://flourish.studio/
- Pretty easy to use and configure
- Lots of possibilities
- Result doesn't always look amazing

Datawrapper

Datawrapper

- https://datawrapper.de/
- Not super-intuitive
- ...but probably the one that produces the best-looking visualizations!

Ricoverati con sintomi

- Altro (2.268)
- Puglia (480)
- Lazio (878)
- Marche (977)
- Liguria (998)
- Toscana (1.037)
- Veneto (1.447)
- Piemonte (2.633)
- Lombardia (10.681)
- Emilia Romagna (3.354)

Wikitude Studio

Introduction

Wikitude Studio is an authoring tool for easily creating **augmented reality experiences without the need for deep technical abilities** or programming skills.

Furthermore, it is used by developers who want to implement an augmented reality application on their own.

Projects

- Image Projects:
    - augment planar surfaces (e.g. 2D pages of a magazine)
    - WTC file
- Object Projects:
    - augment real objects (e.g. 3D statues)
    - WTO file
- A file which contains all information for recognition and tracking is created
- Files are used to create fully functional offline AR experiences

https://www.wikitude.com/external/doc/documentation/studio/targetmanagement.html

Target images

Image dimensions between 500 and 1000 pixels in each dimension

Squarish aspect ratio (1:1, 3:4, 2:3 up to 16:9). No panoramas

High contrast, large amount of rich textured areas

Evenly distributed textured areas

Crop the most prominent part of the image

Some graphical material and images next to text

Irregular patterns