



Consumer Online Chart Tools

Group 2 - Chris, Lisa, Markus & Romy

Reviewed Visualization Tools

1. Flourish flourish.studio (Markus)
2. 23degrees app.23degrees.io (Markus)
3. Datawrapper datawrapper.de (Chris)
4. ECharts echarts.apache.org (Chris)
5. Infogram infogram.com (Romy)
6. plotly chart-studio.plotly.com (Romy)
7. Everviz everviz.com (Lisa)
8. RAW rawgraphs.io (Lisa)

1. Chartblocks chartblocks.com
2. Amcharts live.amcharts.com
3. OnlineChartTool onlinecharttool.com
4. Canva canva.com
5. Tableau tableau.com
6. Visme visme.co/graph-maker
7. Livegap livegap.com
8. Google-App app.diagrams.net



Mode of Operation

4 data sets

- Inhabitants of 3 districts in Graz divided by age (Grouped Column Chart)
- COVID-19 Active cases in 4 countries over 2 months (Line Chart)
- 30 movies including 6 dimensions of data (Scatter Plot)
- Nuclear power plants in Europe (Miscellaneous Plot)

Tried to visualize in the same way on every platform

If not possible -> try to represent data as clearly as you can

Dataset 1

- 300 data points
- Ages 0-100 for 3 districts

	A	B	C	D
1	Age	Innere Stadt	St.Leonhard	Geidorf
2	0	29	129	192
3	1	24	98	187
4	2	21	88	155
5	3	21	101	154
6	4	17	105	153
7	5	17	91	153
8	6	19	82	138
9	7	15	92	168
10	8	19	84	159
11	9	19	85	150
12	10	21	85	153
13	11	23	88	158
14	12	21	104	147
15	13	20	87	141
16	14	25	100	140
17	15	23	108	140
18	16	29	97	151
19	17	27	107	162
20	18	35	137	281
21	19	46	266	521
22	20	90	365	736
23	21	103	500	855

Dataset 2

- 232 data points
- 58 days for 4 countries
- 25. February - 22. April

	A	B	C	D	E
1	date	Austria	Sweden	South Korea	United Kingdom
2	2020-02-25	0	0	130	0
3	2020-02-26	2	0	254	0
4	2020-02-27	0	1	449	0
5	2020-02-28	3	5	427	3
6	2020-02-29	2	5	909	2
7	2020-03-01	3	1	595	5
8	2020-03-02	4	1	686	13
9	2020-03-03	4	1	600	4
10	2020-03-04	6	9	516	11
11	2020-03-05	5	11	438	34
12	2020-03-06	12	26	518	30
13	2020-03-07	33	76	483	48
14	2020-03-08	25	24	367	43
15	2020-03-09	3	42	248	67
16	2020-03-10	29	45	131	48
17	2020-03-11	51	78	242	52
18	2020-03-12	64	136	114	83
19	2020-03-13	115	158	110	134
20	2020-03-14	143	155	107	117
21	2020-03-15	151	149	76	433
22	2020-03-16	205	108	74	251

Dataset 3

- 30 data points
- Each movie consists of 6 dimensions
- Goal of visualizing as many as possible

	A	B	C	D	E	F
1	movie_title	duration	gross	budget	title_year	imdb_score
2	Avatar	178	760505847	237000000	2009	7.9
3	Pirates of the Ca	169	309404152	300000000	2007	7.1
4	Spectre	148	200074175	245000000	2015	6.8
5	The Dark Knight	164	448130642	250000000	2012	8.5
6	John Carter	132	73058679	263700000	2012	6.6
7	Spider-Man 3	156	336530303	258000000	2007	6.2
8	Tangled	100	200807262	260000000	2010	7.8
9	Avengers: Age of	141	458991599	250000000	2015	7.5
10	Harry Potter and	153	301956980	250000000	2009	7.5
11	Batman v Superr	183	330249062	250000000	2016	6.9
12	Superman Return	169	200069408	209000000	2006	6.1
13	Quantum of Sola	106	168368427	200000000	2008	6.7
14	Pirates of the Ca	151	423032628	225000000	2006	7.3
15	The Lone Ranger	150	89289910	215000000	2013	6.5
16	Man of Steel	143	291021565	225000000	2013	7.2
17	The Chronicles o	150	141614023	225000000	2008	6.6
18	The Avengers	173	623279547	220000000	2012	8.1

Dataset 4

- 150 data points
- Each nuclear power plant with 6 dimensions
- Goal of visualizing the data to the best capabilities of the application

fx	A	B	C	D	E	F	G
1	Land	Breitengrad	Laengengrad	Status	AKW-Name	Betreiber	
2	Belgien	51.215755	5.095854	Shut down	BR	SCK-CEN	
3	Belgien	51.326321	4.259262	Active	Doel	Electrabel	
4	Belgien	50.183933	4.932861	Active	Tihange	Electrabel	
5	Bulgarien	43.629272	25.186714	Construction stop	Belene		
6	Bulgarien	43.448933	24.213867	Shut down	Kozloduy 1-4		
7	Bulgarien	43.484814	24.169922	Active	Kozloduy 5-6		
8	Deutschland	49.710133	8.414369	Shut down	Biblis	RWE	
9	Deutschland	53.850895	9.345245	Active	Brokdorf	E.ON	
10	Deutschland	53.891682	9.201951	Shut down	Brunsbüttel	Vattenfall	
11	Deutschland	52.472298	7.317002	Active	Emsland	RWE	
12	Deutschland	50.000015	10.197716	Active	Grafenrheinfeld	E.ON	
13	Deutschland	54.139565	13.664417	Shut down	Greifswald	Energiewerke Nord	
14	Deutschland	52.032219	9.371338	Active	Grohnde	E.ON	
15	Deutschland	50.058142	8.987131	Shut down	Großwelzheim	Heißdampfreaktor-BGmbH	
16	Deutschland	48.52388	10.38208	Shut down	Gundremmingen	KKW Grundremmingen	
17	Deutschland	48.52388	10.38208	Active	Gundremmingen	RWE	
18	Deutschland	51.679703	7.96932	Shut down	Hamm-Uentrop	HT-KKW	
19	Deutschland	48.602608	12.292972	Shut down	Isar 1	E.ON	
20	Deutschland	48.516605	12.65625	Active	Isar 2	E.ON	
21	Deutschland	50.902985	6.421208	Shut down	Jülich	AG Versuchsreaktor GmbH	
22	Deutschland	50.059119	8.987278	Shut down	Kahl	VAK Kahl GmbH	
23	Deutschland	49.098446	8.43293	Shut down	Karlsruhe	KKW BGmbH	
24	Deutschland	49.103905	8.43235	Shut down	Karlsruhe	FZ Karlsruhe	
25	Deutschland	53.410172	10.409417	Shut down	Krümmel	Vattenfall	
26	Deutschland	52.48325	7.300887	Shut down	Lingen	RWE	



Grading System

5 Categories:

1. Simplicity
2. Documentation
3. Customizability
4. Privacy
5. Components

- Each scored from 0-4 to give quick overview
- Grades were decided in group to keep them objective
- Final Grade is average of the 5 categories



Flourish

<https://flourish.studio/>

https://youtu.be/qRQBDTxHC_4

Pros:

- Large variety of visualizations
- Many sample visualizations/tutorials
- Very clean design
- Can create animations and slide shows

Cons:

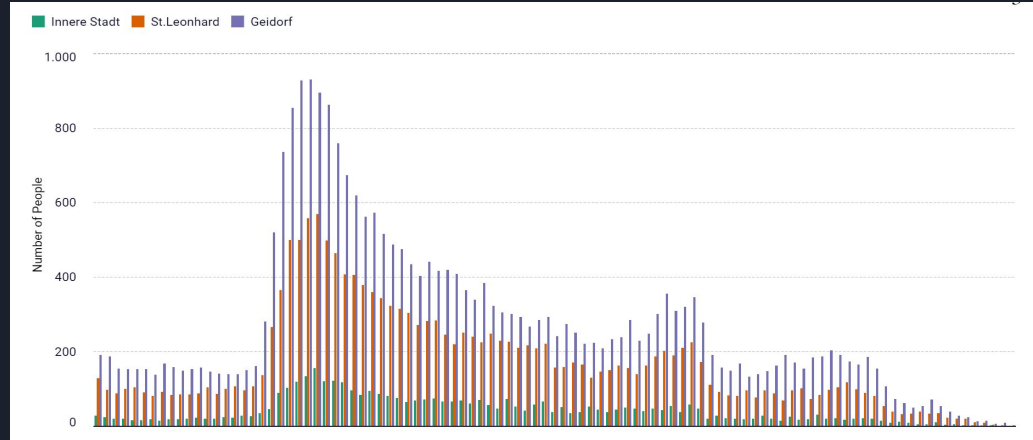
- Data is public unless you have a premium membership

Business Model:

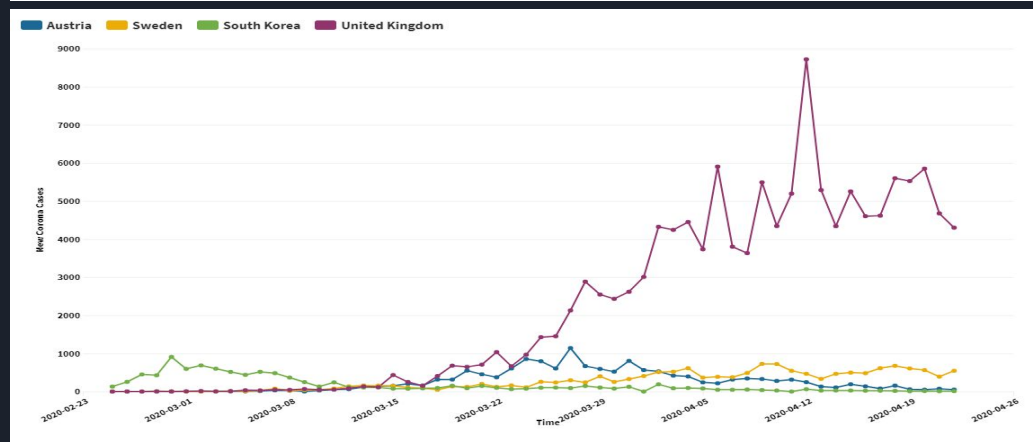
- Free, account required
- Premium memberships allow access to email support and keep your data private

Flourish - Visualizations

Column Chart:

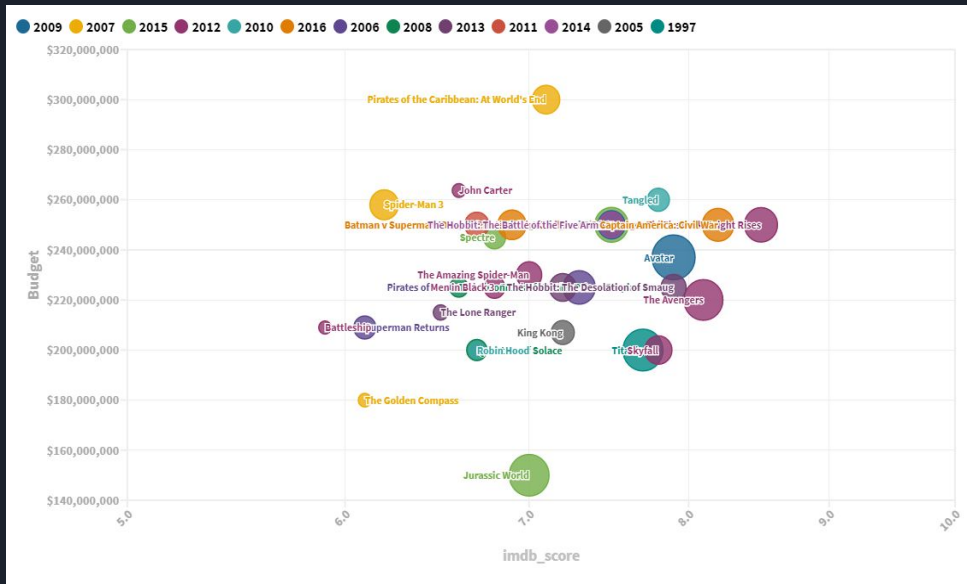


Line Chart:

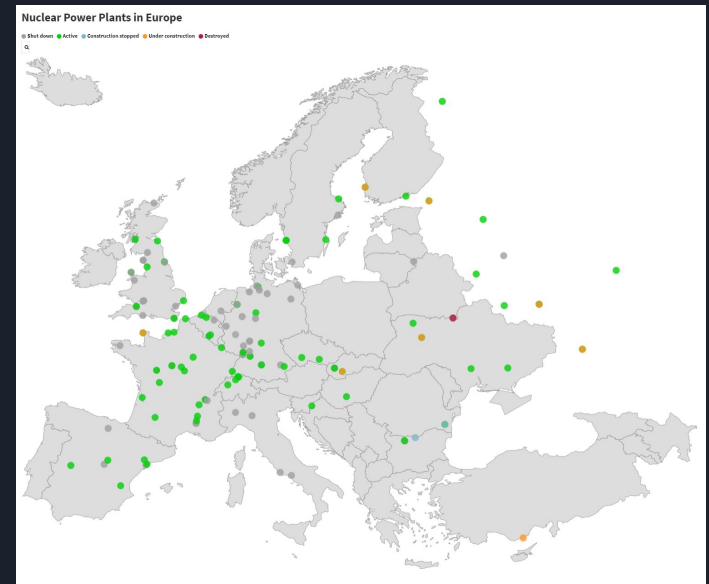


Flourish - Visualizations

Scatter Plot:



Misc. Plot:





23degrees

<https://app.23degrees.io/>

Pros:

- Good number of customization options

Business Model:

- Free, account required
- Premium memberships allow downloading and more customizability

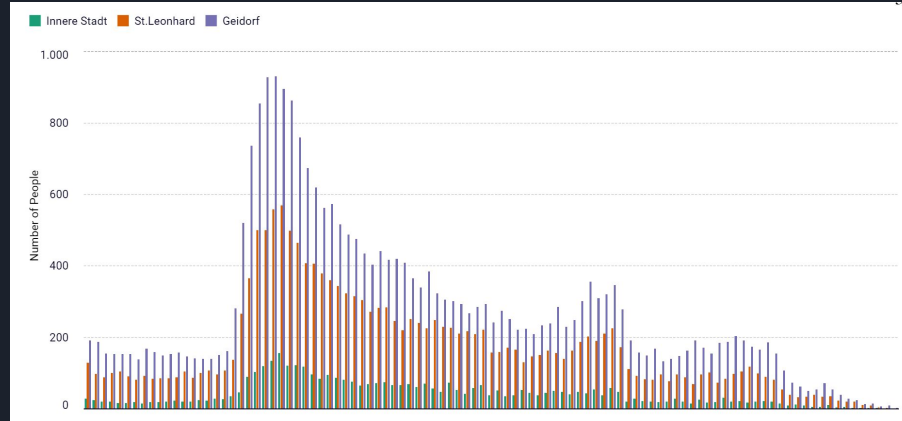
<https://youtu.be/C07CnVNsPgg>

Cons:

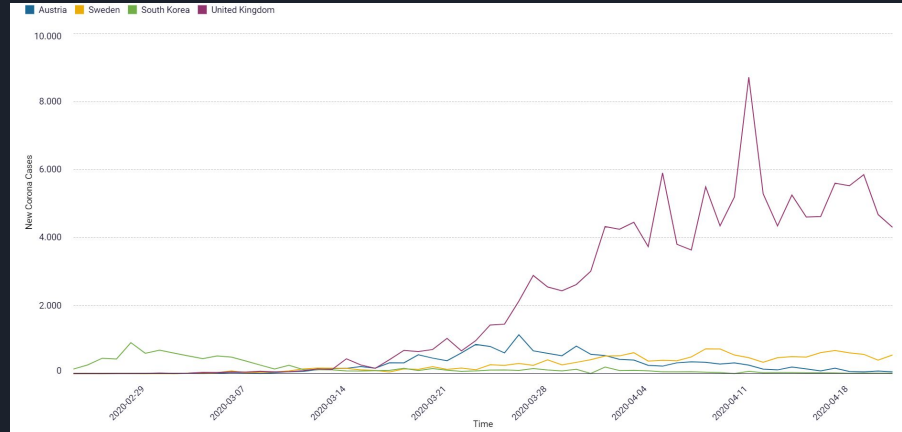
- Data is public unless you have a premium membership
- No option to download visualization
- No tutorials
- Types of visualizations limited
- Very hard to modify dataset after importing

23degrees

Column Chart:



Line Chart:

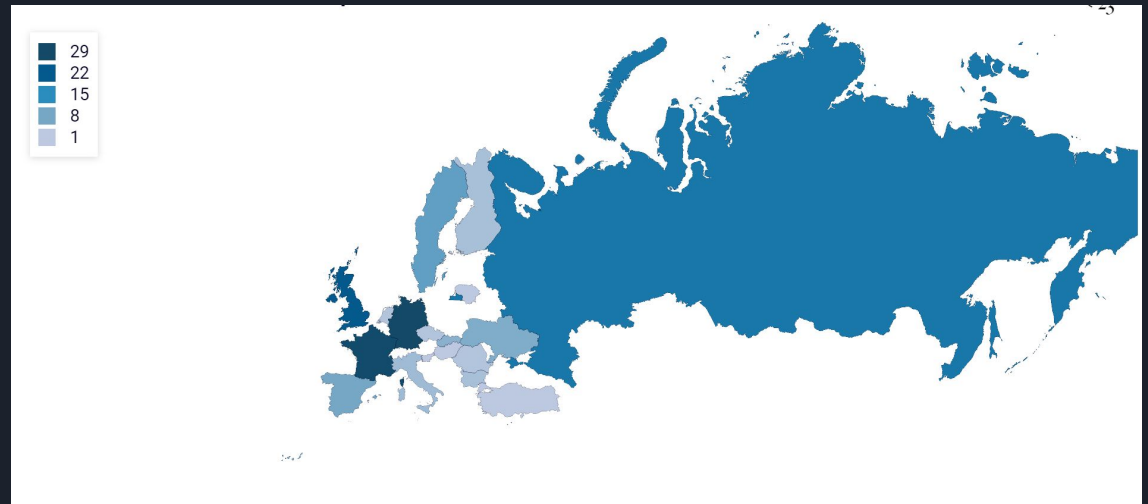


23degrees - Visualizations

Scatter Plot:

Misc. Plot:

NOT POSSIBLE





Datawrapper

<https://www.datawrapper.de/>

<https://youtu.be/-Ex-P4yI3rs>

Pros:

- Documentation + Tutorials
- Ease of Use
- Design
- No Account needed

Cons:

- Limited customization options
- Visualization depends on dataset formatting -> this can get very tedious at times

Business Model:

Generally free - offers 2 paid tiers for small businesses and enterprise use

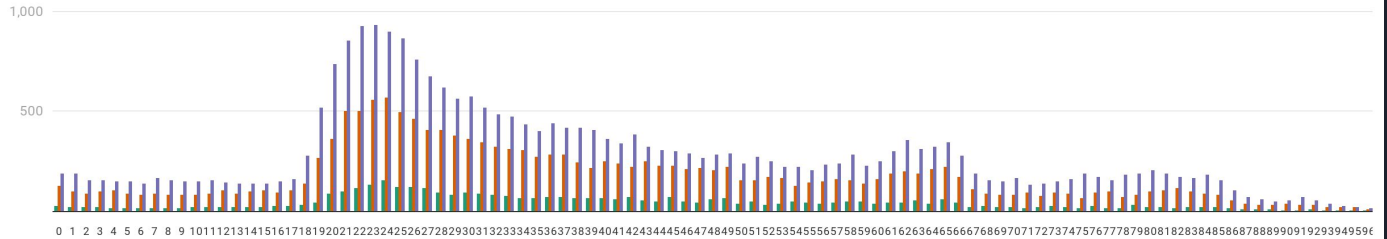
Datawrapper - Visualizations

Column
Chart:

Inhabitants in 3 districts of Graz

The x-axis represents the age of the inhabitants while the y-axis represents the total amount of inhabitants at that age.

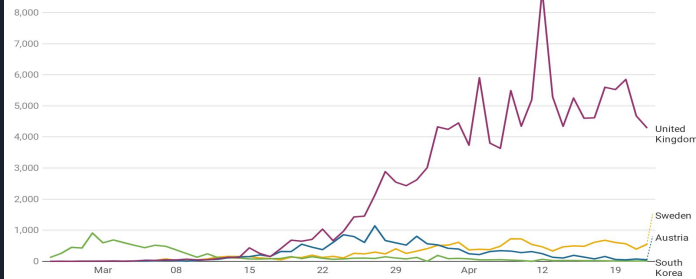
■ Innere Stadt ■ St.Leonhard ■ Geidorf



Line Chart:

Active Corona Cases in 4 Countries

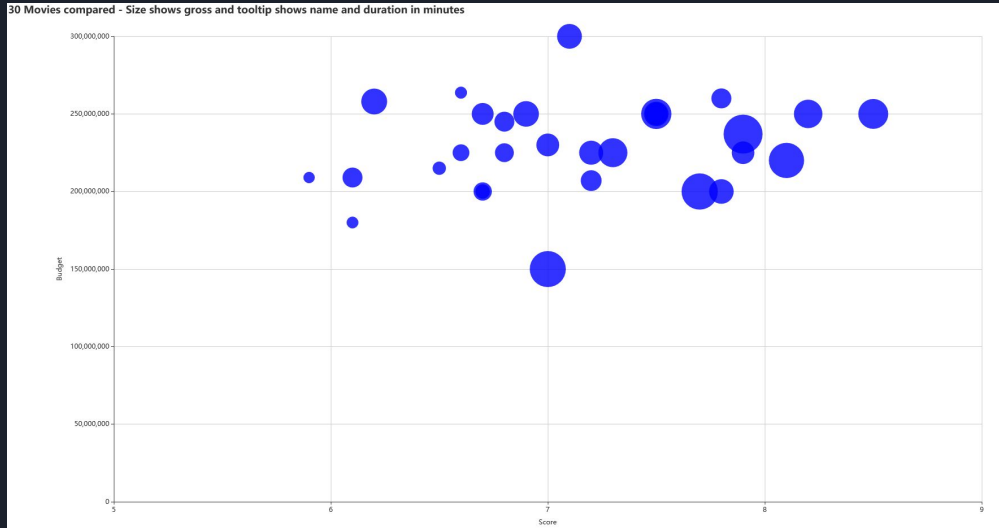
X-axis represents time and y-axis the amount of people currently suffering from COVID-19



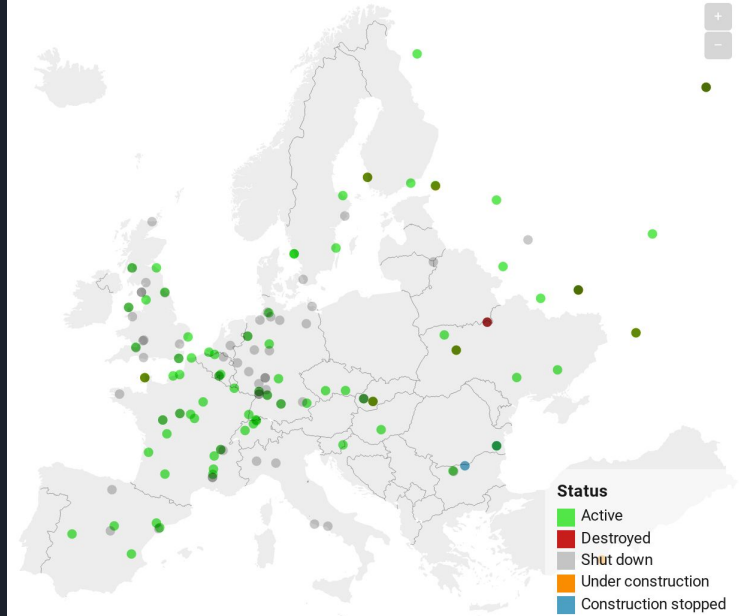
Datawrapper - Visualizations

Scatter Plot:

Misc. Plot:



Nuclear Powerplants in Europe



• Created with Datawrapper



Infogram

<https://infogram.com/>

<https://youtu.be/Sa2C1TekKOI>

Pros:

- Easy to create simple charts
- Can create reports, slides, dashboards and social media posts
- Tutorial videos

Cons:

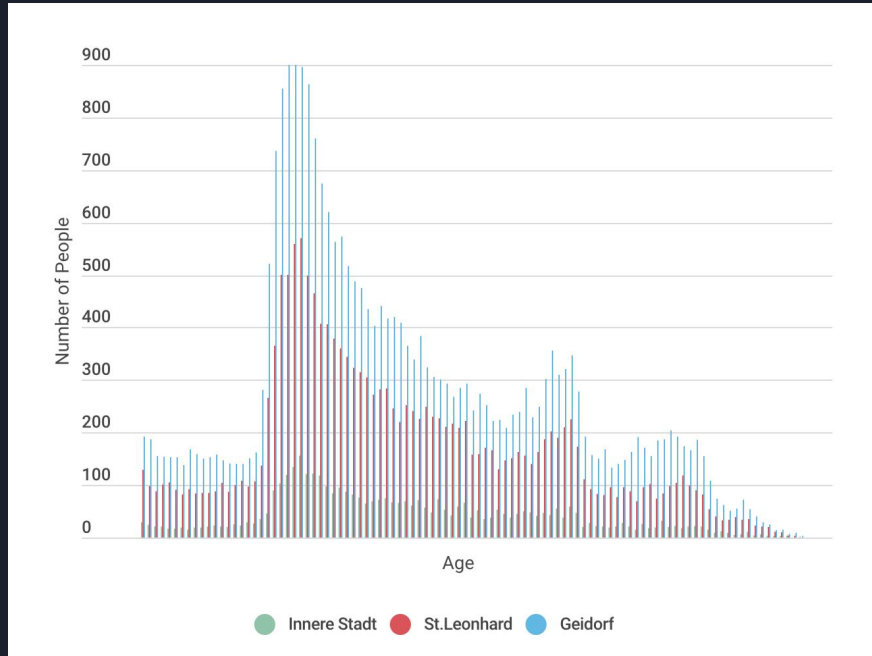
- Chart depends on dataset
- Customization of charts limited
- No download of charts for basic account possible
- Number of projects limited
- Data is public for basic account

Business Model:

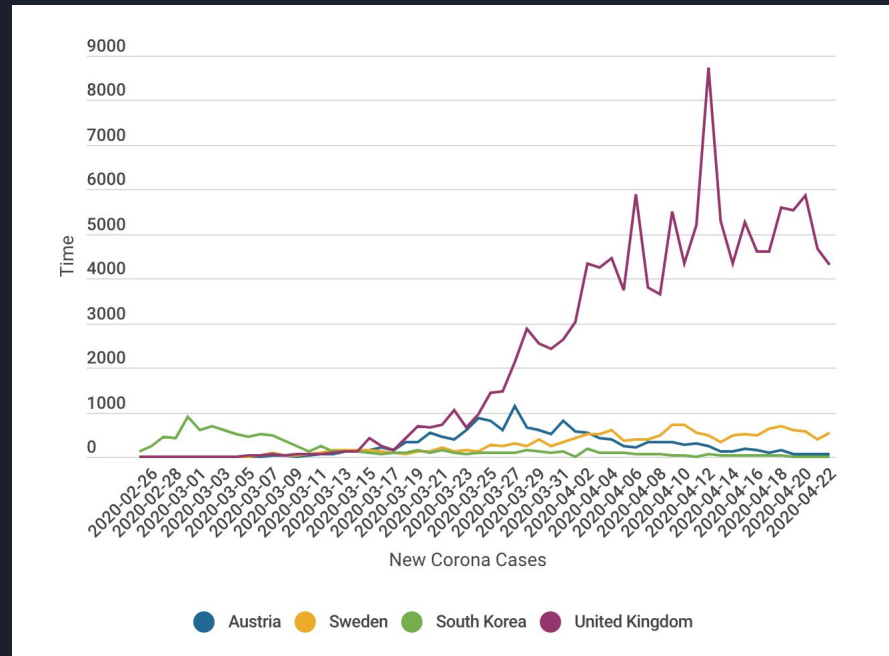
Generally free - offers 4 variants of paid accounts

Infogram - Visualizations

Column Chart:

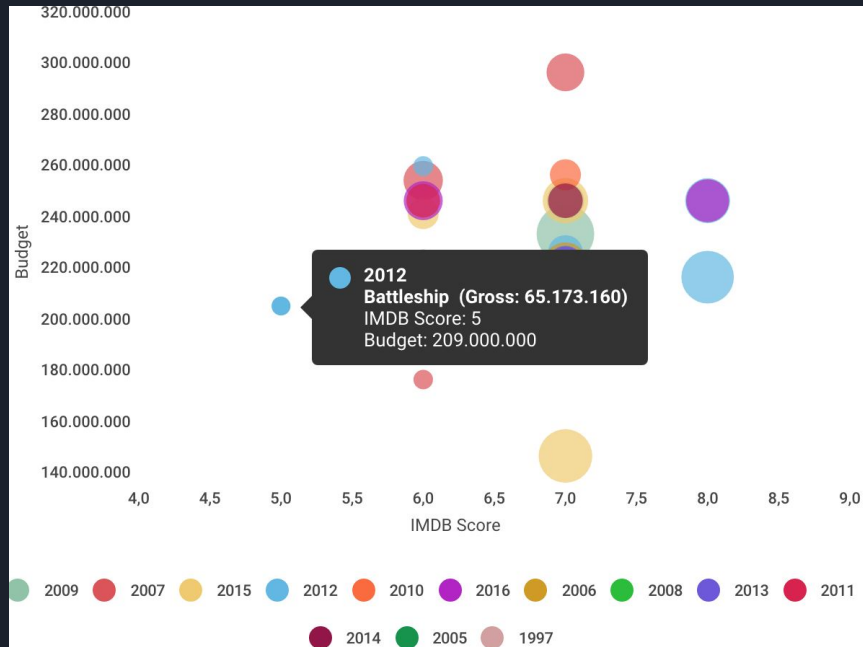


Line Chart:

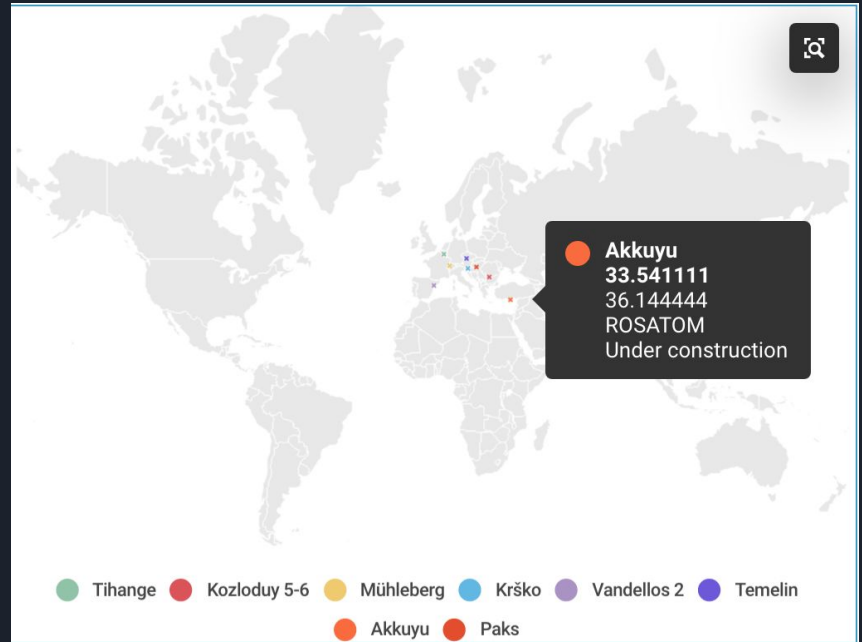


Infogram - Visualizations

Scatter Plot:



Misc. Plot:





plotly

<https://chart-studio.plotly.com/>

<https://youtu.be/GcPFPe6qHdI>

Pros:

- Ease of use
- Good structure/design
- Good documentation
- Open Source

Cons:

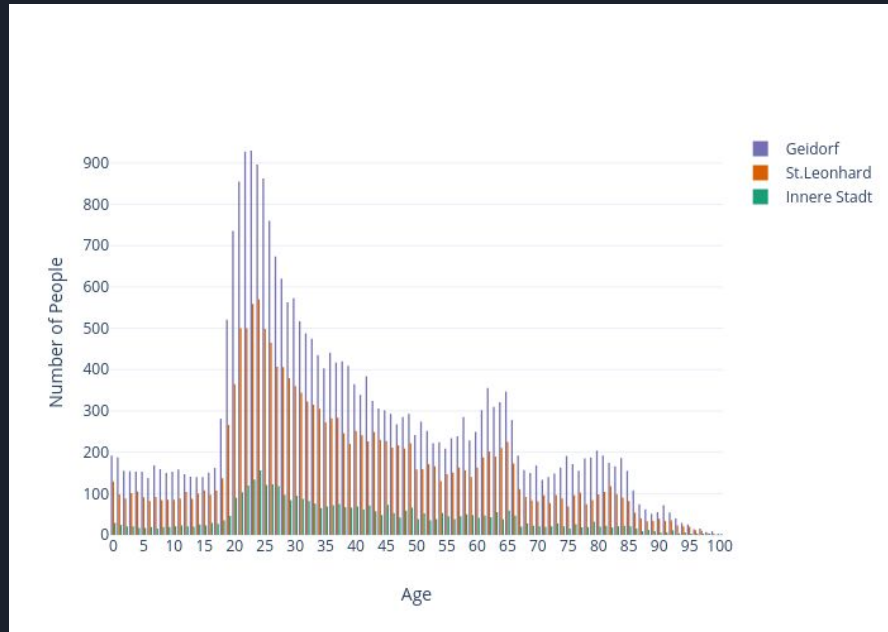
- Not all export possibilities for basic account
- Charts are all public for basic account

Business Model:

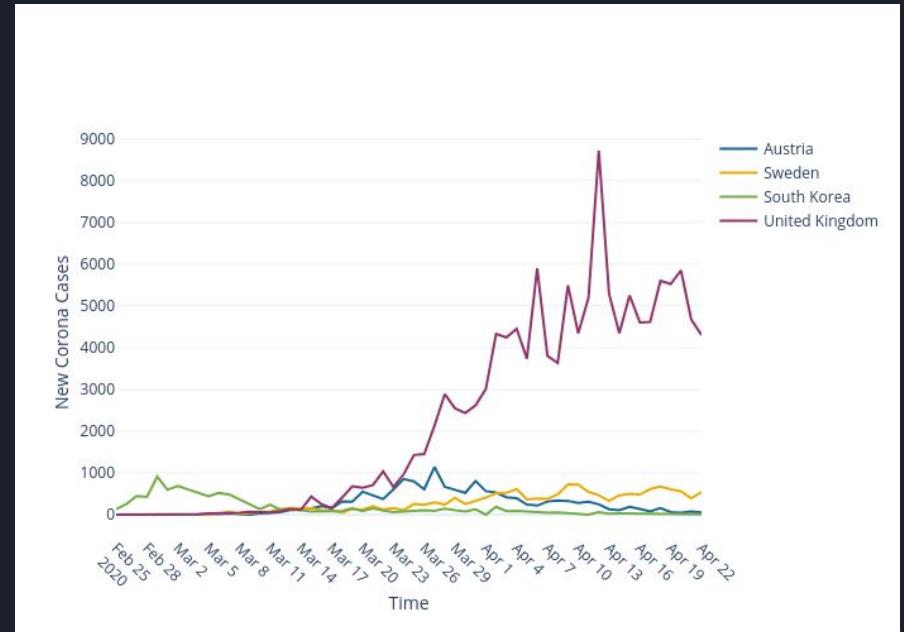
Generally free - offers a paid account for enterprise

plotly - Visualizations

Column Chart:



Line Chart:





Everviz

<https://everviz.com/>

<https://youtu.be/Abn4WWo1P9g>

Pros:

- Team/Group management
- Interactive charts
- Chart variety
- Powerful

Cons:

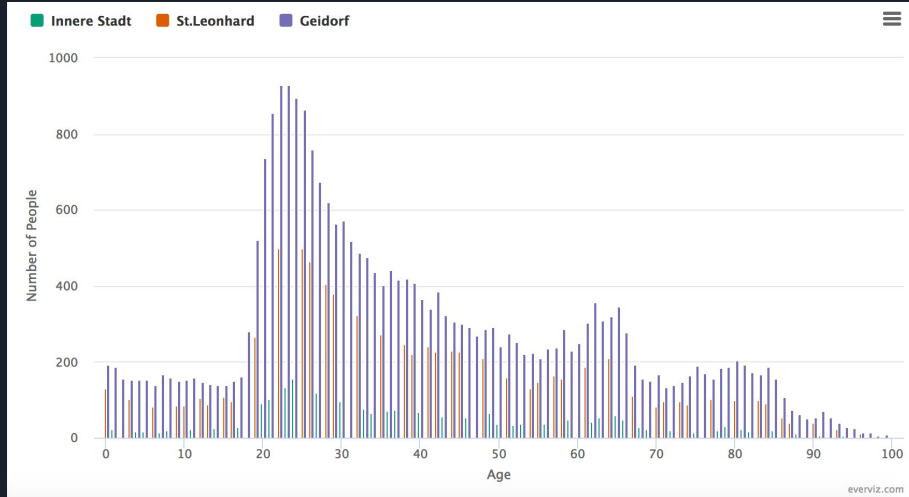
- Insufficient documentation
- High learning effort necessary

Business Model:

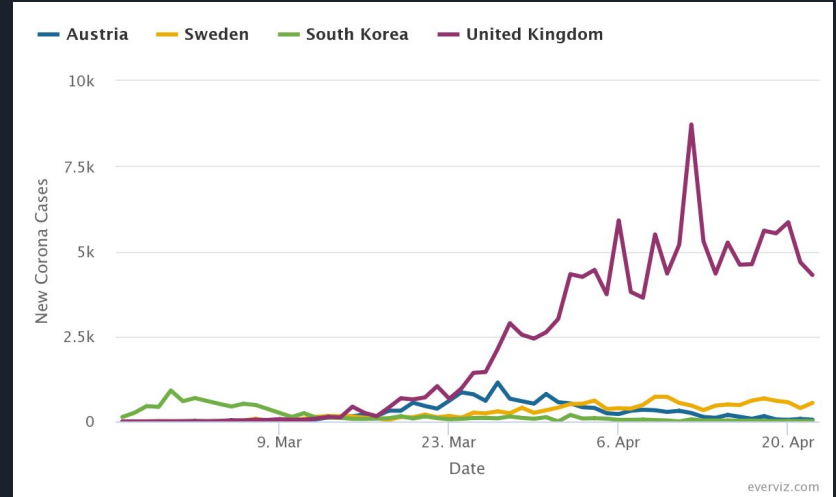
Not free - 3 variants of paid accounts

Everviz - Visualizations

Column Chart:

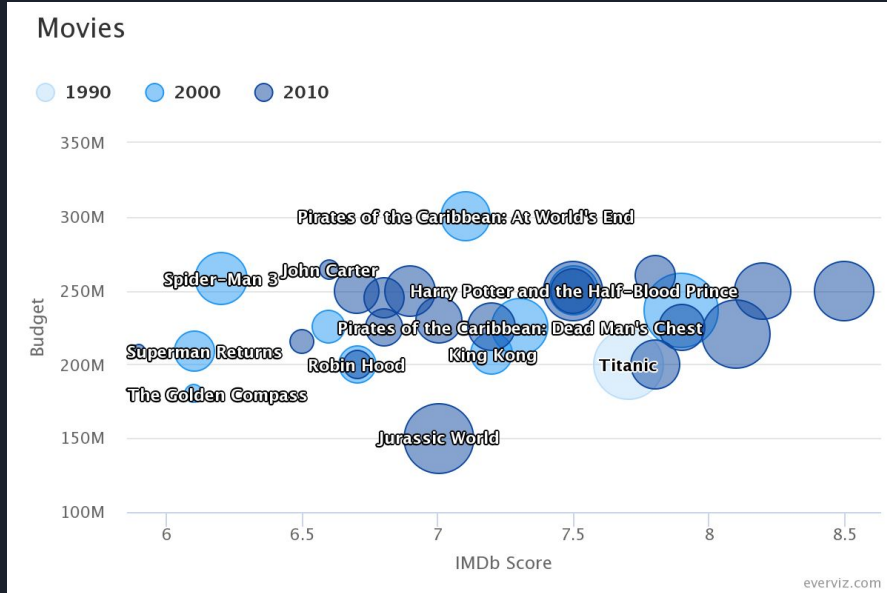


Line Chart:

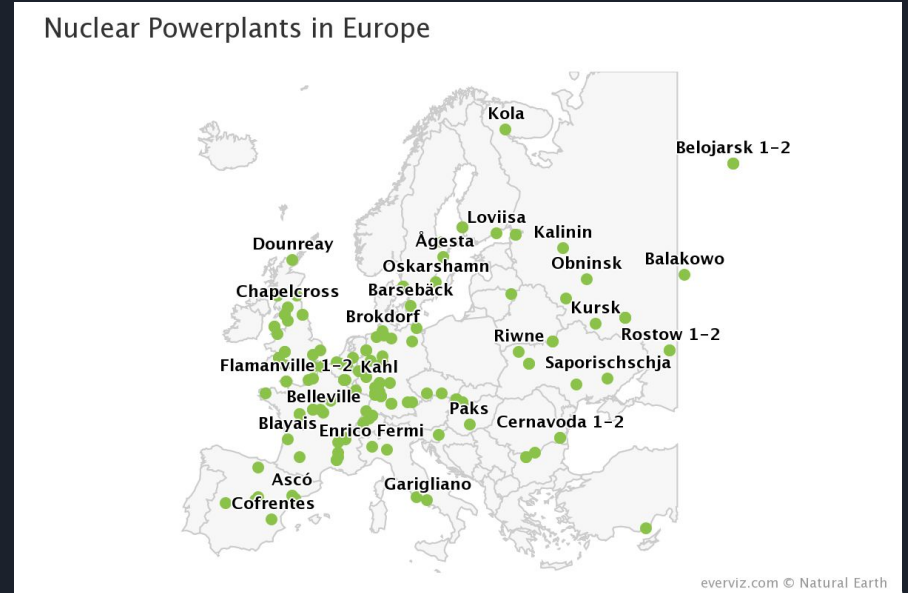


Everviz - Visualizations

Scatter Plot:



Misc. Plot:





RAWGraphs

<https://rawgraphs.io/>

<https://youtu.be/7RVg4zk71o4>

Pros:

- Simple
- Good documentation
- Open Source

Cons:

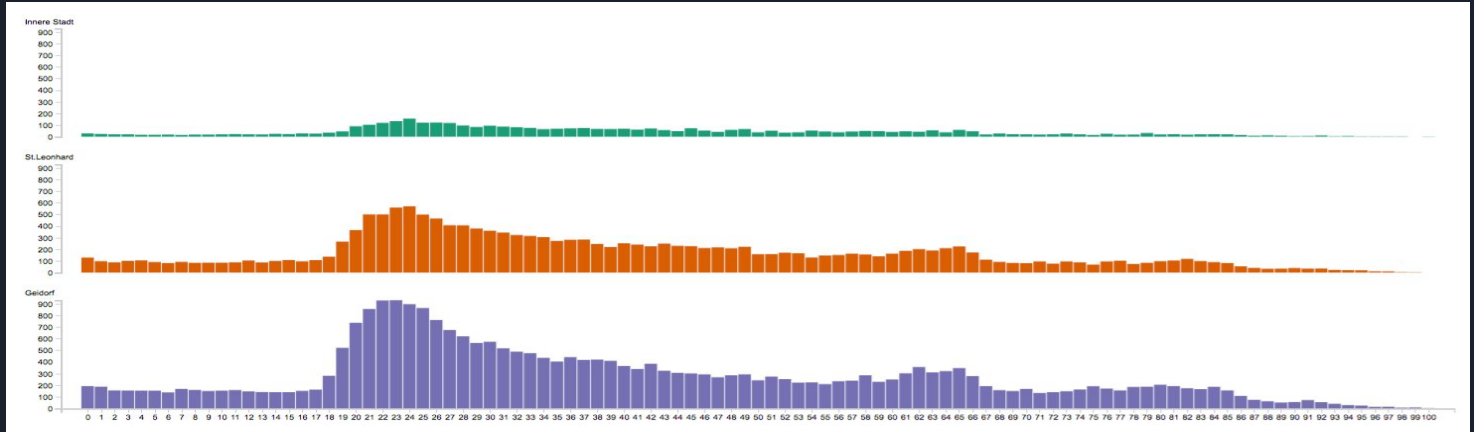
- Few customization options available
- No interactive charts

Business Model:

Free, no account required

RAWGraphs - Visualizations

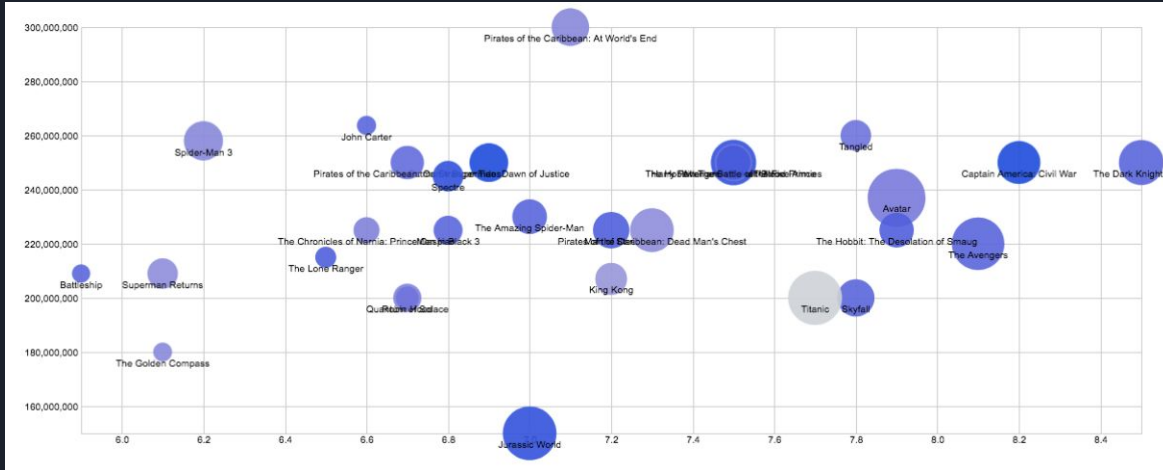
Column
Chart:



Line Chart: **NOT POSSIBLE**

RAWGraphs - Visualizations

Scatter Plot:



Misc. Plot:



Grades

Name	Simplicity	Documentation	Customizability	Privacy	Features	Final Grade
Flourish	4	3	3	2	4	3.2
23degrees	1	0	3	2	1	1.4
Datawrapper	3	4	1	4	3	3.0
Infogram	3	3	1	1	3	2.2
plotly	4	3	3	2	3	3.0
Everviz	2	0	3	3	4	2.4
RAWGraphs	4	4	0	4	2	2.8



Recommendation

Best Allrounder :

Flourish

Easiest to use :

plotly and RAWGraphs

For Maps:

Datawrapper

For Scatter Plots :

plotly