# Card Sorting Tools

Group G3:

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# Card Sorting Introduction

- Technique in user experience design.

- Assign the different cards to the matching category.

- Low-tech approach.

- Used e.g. for designing a navigation structure.

- Closed vs. open card sorting.
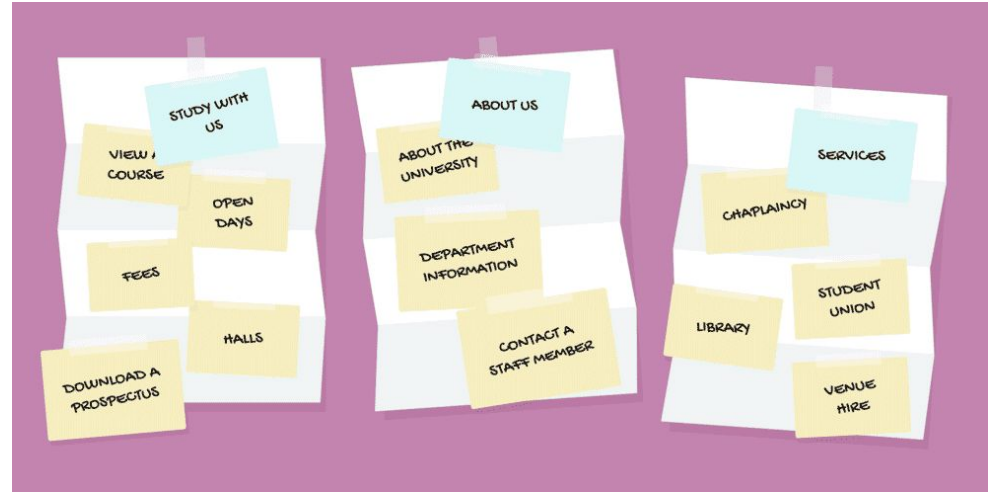
Picture taken from boagworld.com on 15.11.2020

Review Process

- 2 datasets prepared.

- Prepare 1 experiment for each set.

- Predefined characteristics check.

- Let other reviewers participate in experiments.

- Decide on initial ratings.

- Discuss with other reviewers.
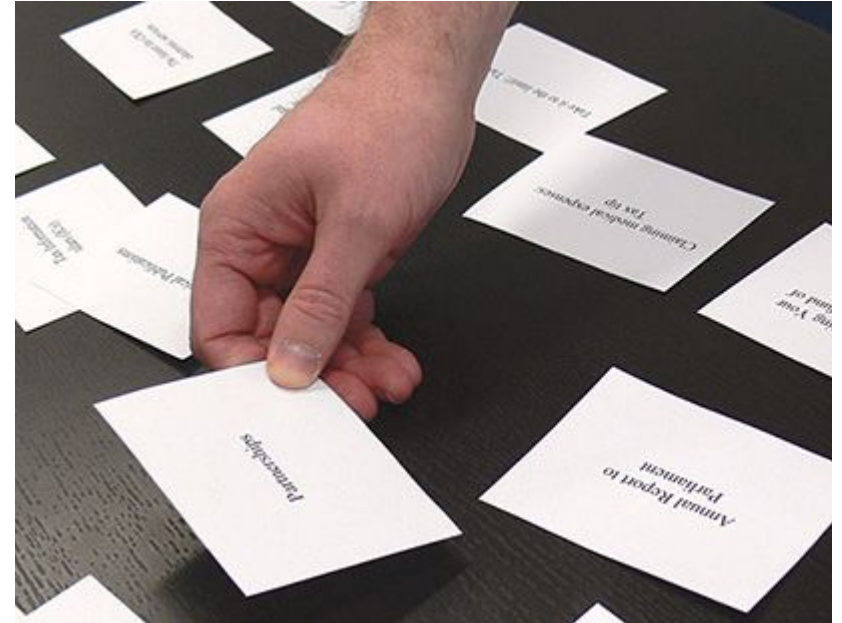
Picture taken from nform.com on 15.11.2020

Datasets

Animals

CARDS (10)
Dog
Cow
Butterfly
Snake
Bear
...

Cars

CARDS (54)
Porsche
Ferrari
BMW
Audi
Honda
...

Reviewed Tools

Functionalities:

SORTING

ANALYSIS

BOTH

Christopher	Markus R.	Markus S.
kardSort	UXtweak	xSort
SynCaps v3	ProvenByUsers	OptimalSort
Casolysis	CSA	

Other Tools

- SortIt (not buildable)
- UserZoom (do not respond)
- UsabilityTools UXSuite (acquired by competitor)

- SimpleCardSort (discontinued)
- usabiliTEST (acquired by competitor)
- ConceptCodify (acquired by competitor)

OptimalSort

- Free/paid version.

- Very large range of functions (also for free version).

- Nice designed.

- Very intuitive to handle.

- Showcase Video

Screenshot captured by Markus Stradner in Safari on macOS Catalina 10.15.7, 15.11.2020
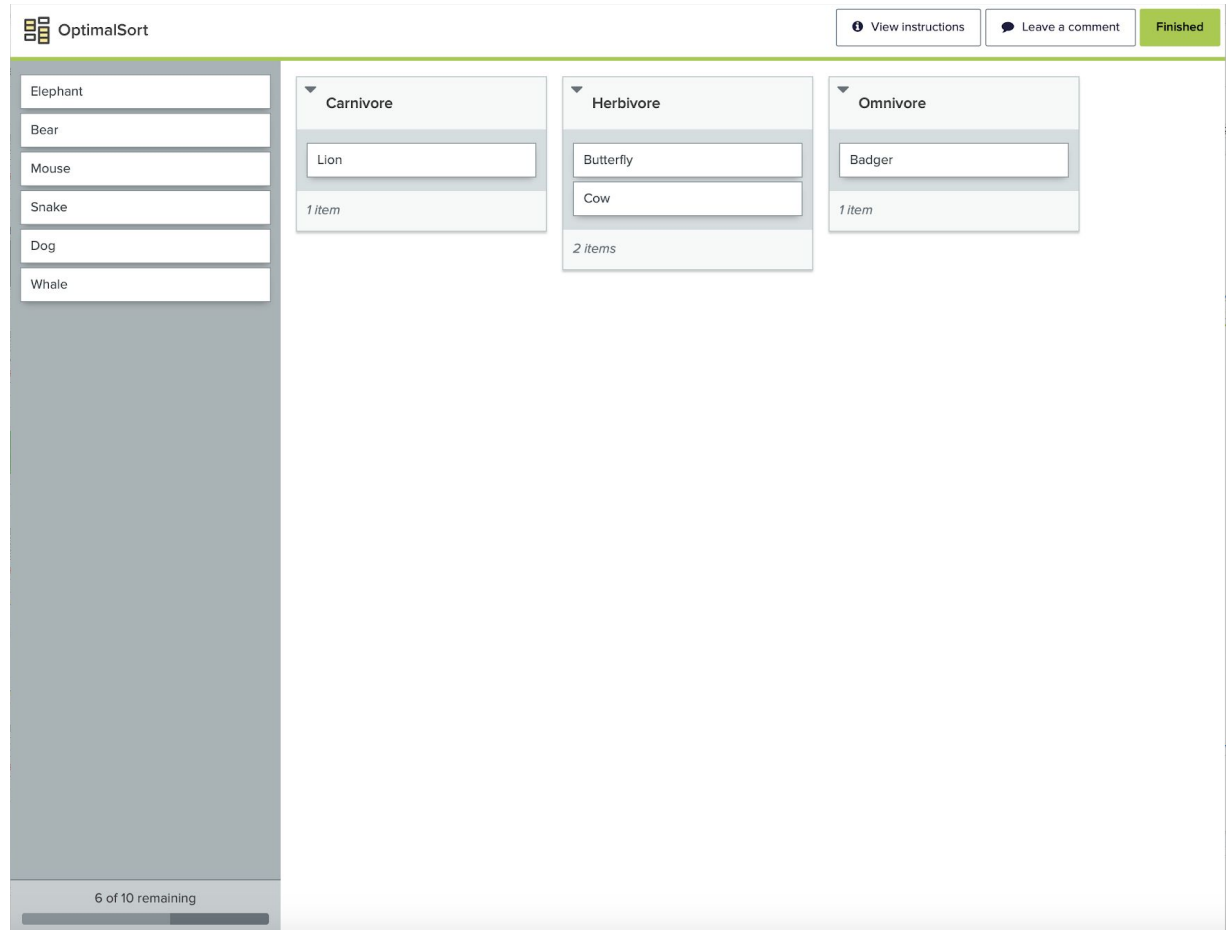
LIVE-DEMO

OptimalSort

OptimalSort

Pro	Contra
Easy to use.	Account is required.
Nice dashboard with studies, demos, instructions, 10-step-tutorial etc.	Max. 30 cards (free version).
Imports/exports possible.	Max. 10 participants (free version).
Nice analysis pages (charts, diagrams, etc.).	

Simplicity	Documentation	Features	Business Model
4	5	5	3

xSort

- Only local version for macOS available.

- Free of charge.

- Not up to modern standards.

- Table View & outline view possible.

- Showcase Video
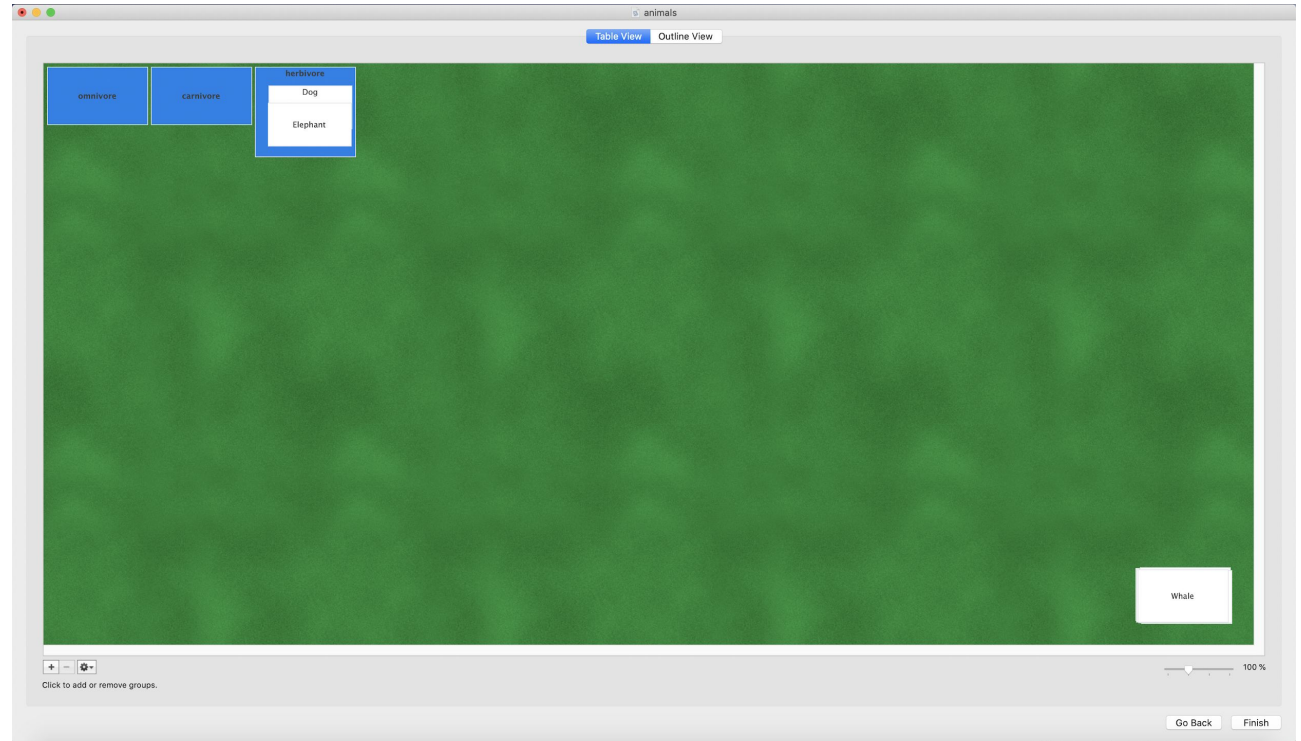
Screenshot captured by Markus Stradner on macOS Catalina 10.15.7, 15.11.2020

xSort

Pro	Contra
Password security possible.	Not online - only local studies possible.
Zooming tool.	Bad design including small bugs.
Clean up tool.	Documentation only online available.
Free of charge.	No rasterizing for groups/cards.

Simplicity	Documentation	Features	Business Model
2	2	3	4

UXtweak

- Offers a number of different usability tests.

- Easy to use.

- Friendly user interface.

- Offers a variety of analysis tools.

- Showcase Video
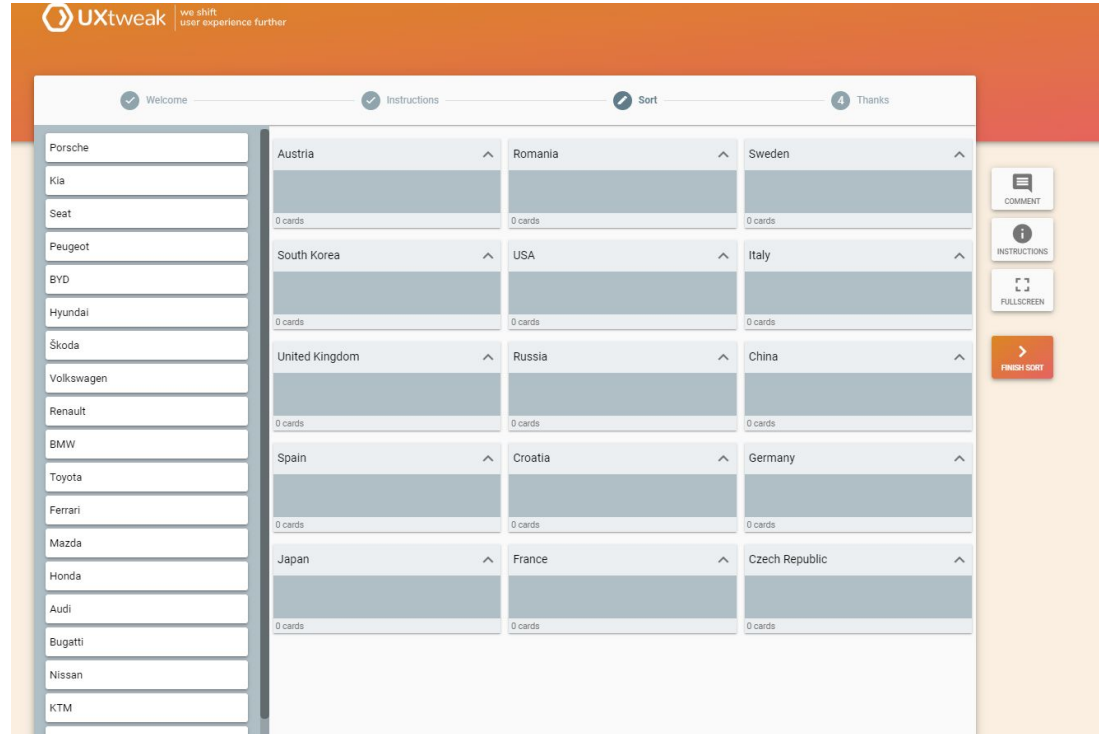
Screenshot captured by Markus Ruplitsch on Windows 10, 15.11.2020

UXtweak

Pro	Contra
Easy to use.	Max. 20 cards (free version).
Detailed documentation with pictures.	Paid version is expensive (280€ per month).
Allows exporting of survey analysis as pdf.	
Supports import and export of .csv.	

Simplicity	Documentation	Features	Business Model
5	4	4	3

ProvenByUsers

- Minimalist UI design.

- Relatively easy to use.

- Great documentation

- Premium plan is required for more than 3 results.

- Showcase Video

Screenshot captured by Markus Ruplitsch on Windows 10, 15.11.2020
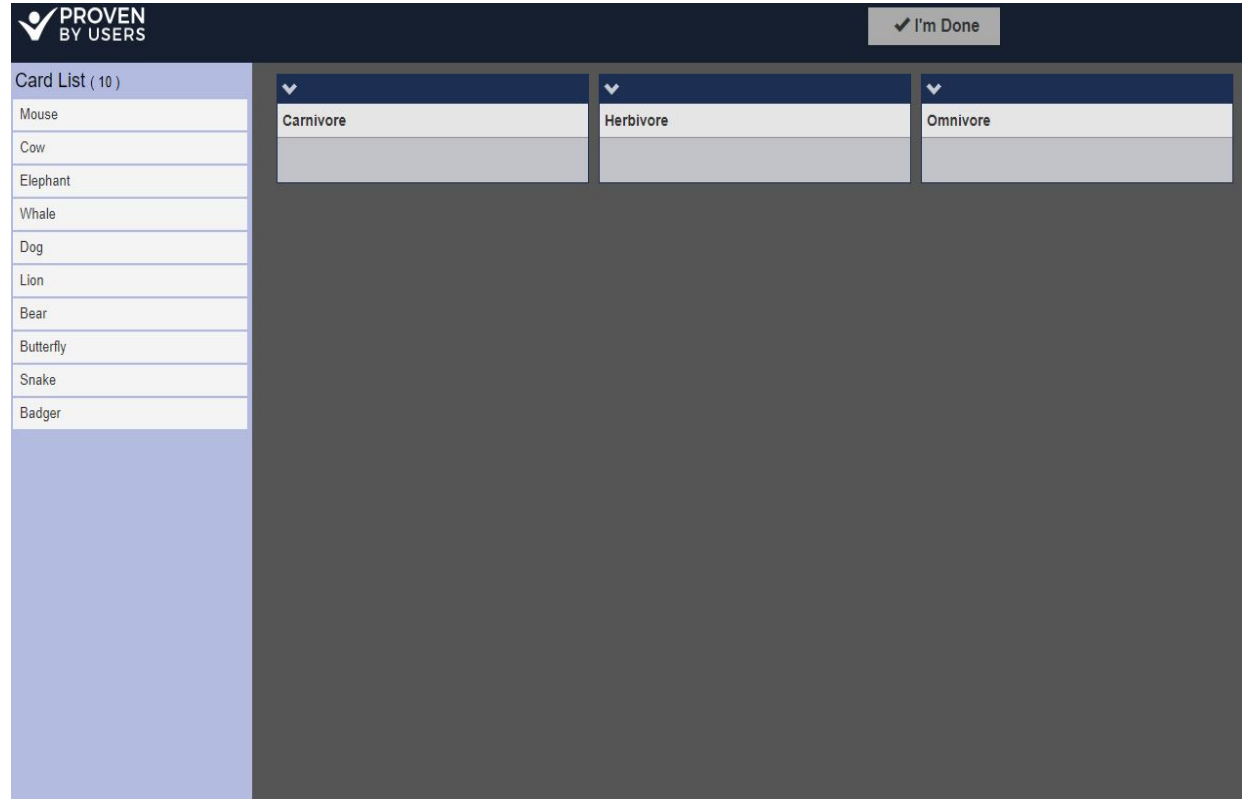
ProvenByUsers

Pro	Contra
Good written documentation.	Max. 3 participants (free version).
Large number of analysis tools available.	39.95$ per month for the full version.
Analysis can be exported as .csv or SynCaps.	

Simplicity	Documentation	Features	Business Model
4	4	4	1

kardSort

- Free of charge.

- Very intuitive to handle.

- Simple - maybe too simple.

- Showcase Video
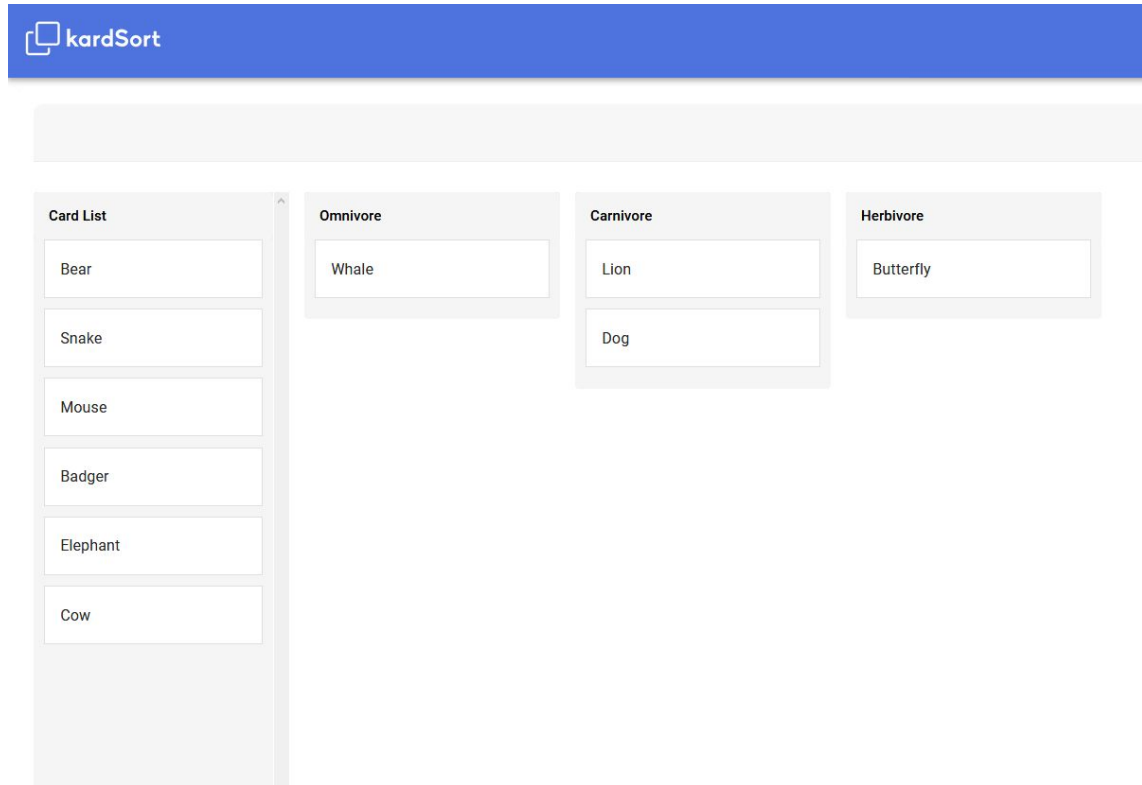
Screenshot captured by Christopher Oser in Google Chrome, 14.11.2020

kardSort

Pro	Contra
Free of charge.	No built in analytics.
Very easy to use.	Max. 50 cards.
Supports export for other analytic tools.	Not good for many categories.
Extra questionnaires and personalization options.	

Simplicity	Documentation	Features	Business Model
5	1	1	5

SynCaps

- The mother of card sorting.

- Intended for paper card sorting.

- Analytic tools & format also used by other providers.

- Not up to modern standards.

- Showcase Video

Screenshot captured by Christopher Oser on Windows 10, 15.11.2020
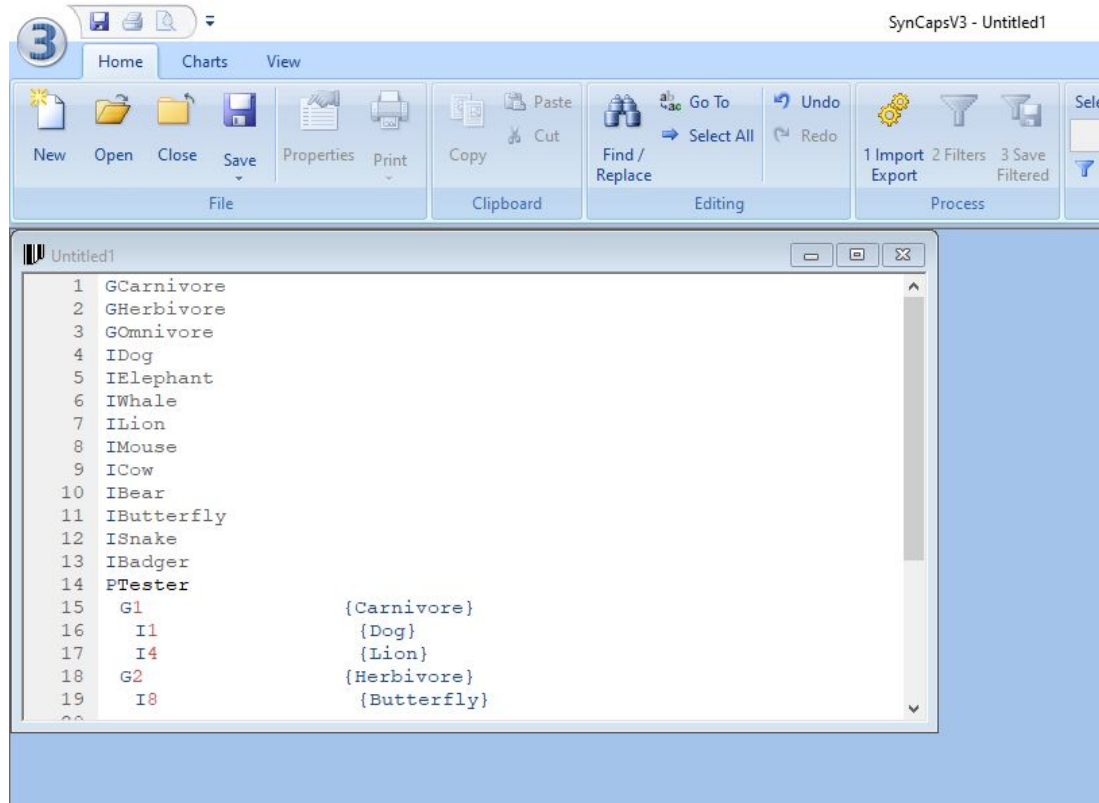
SynCaps

Pro	Contra
Free of charge.	Not intuitive to handle.
Many tiny extra features for analytical purposes.	Physical card sorting or different tool needed.
Supports import and export of .csv and .txt.	Windows installation needed.

Simplicity	Documentation	Features	Business Model
1	2	4 (for analyzing)	5

Casolysis

- Free of charge

- University project

- Intuitive

- No longer under development.

- Windows .exe

CaSoLysis 2.0 - casolysis-animals-closed.csv

View

| Open Project | Save Project As | Save | Close Project | Import CSV | Style | Preview | Database | Heatmap | Distance Matrix | Single Link | Average Link | Complete Link | SLA | DBSCAN | MDS |

File · General · Hierarchical Clustering · Other Algorithms

Distance Matrix ✕ Single Link

User count: 2; Categories count: 3; Cards count: 10

Card1	Badger (6)	Bear (1)	Butterfly (9)	Cow (7)	Dog (5)	Elephant (8)	Lion (2)	Mouse (4)	Snake (10)	Whale (3)
Badger (6)	0									
Bear (1)	0,5	0								
Butterfly (9)	1	1	0							
Cow (7)	1	1	0	0						
Dog (5)	0,5	1	1	1	0					
Elephant (8)	1	1	0	0	1	0				
Lion (2)	1	0,5	1	1	0,5	1	0			
Mouse (4)	0	0,5	1	1	0,5	1	1	0		
Snake (10)	1	1	0,5	0,5	0,5	0,5	0,5	1	0	
Whale (3)	1	0,5	1	1	0,5	1	0	1	0,5	0

Screenshot captured by Christopher Oser on Windows 10, 15.11.2020

Casolysis

Pro	Contra
Free of charge.	No longer under development.
Great analytic capabilities.	Physical card sorting or different tool needed.
No installation needed.	No documentation available.
Easy to use.	

Simplicity	Documentation	Features	Business Model
4	0	4 (for analyzing)	5

CSA

- University project.

- Not publicly available.

- Requires tedious installation process.

- No longer under development.

⬇ Download Co-Occurrence Matrix

☐ 0-5% ☐ 5-10% ☐ 10-20% ☐ 20-40% ☐ 40-60% ☐ 60-80% ☐ 80-100%

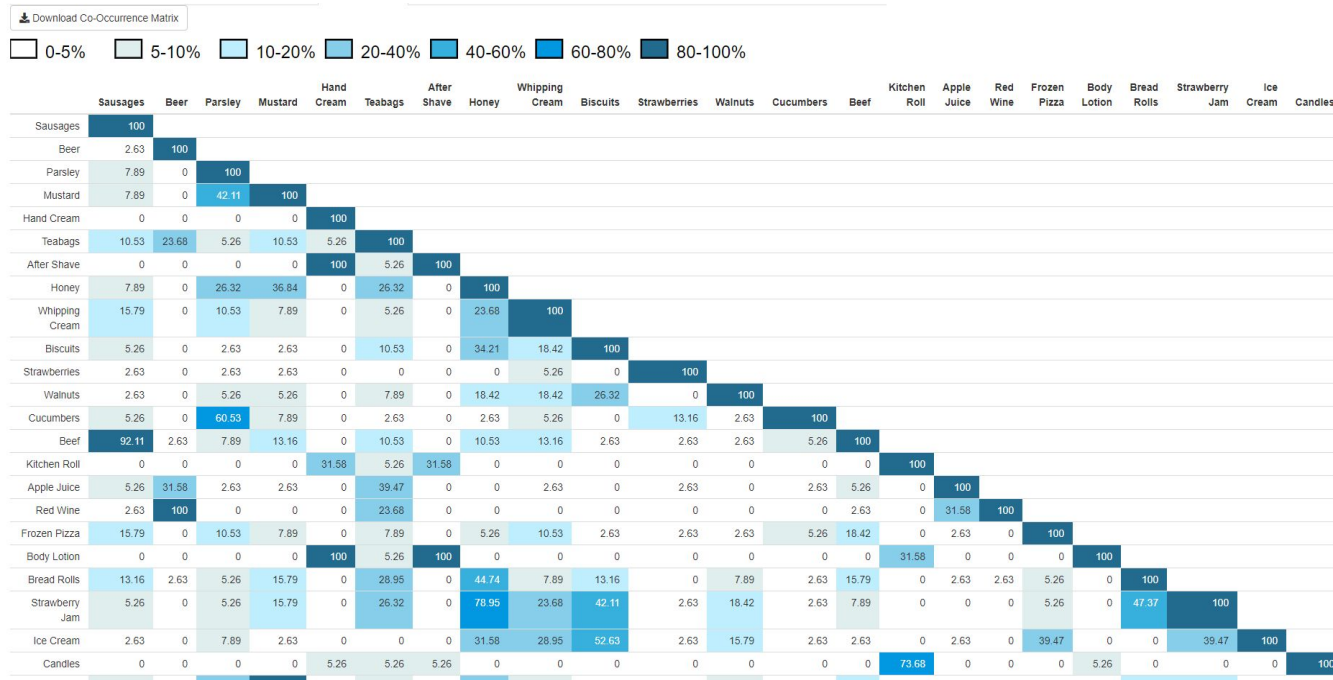|	Sausages	Beer	Parsley	Mustard	Hand Cream	Teabags	After Shave	Honey	Whipping Cream	Biscuits	Strawberries	Walnuts	Cucumbers	Beef	Kitchen Roll	Apple Juice	Red Wine	Frozen Pizza	Body Lotion	Bread Rolls	Strawberry Jam	Ice Cream	Candles
Sausages	100																						
Beer	2.63	100																					
Parsley	7.89	0	100																				
Mustard	7.89	0	42.11	100																			
Hand Cream	0	0	0	0	100																		
Teabags	10.53	23.68	5.26	10.53	5.26	100																	
After Shave	0	0	0	0	100	5.26	100																
Honey	7.89	0	26.32	36.84	0	26.32	0	100															
Whipping Cream	15.79	0	10.53	7.89	0	5.26	0	23.68	100														
Biscuits	5.26	0	2.63	2.63	0	10.53	0	34.21	18.42	100													
Strawberries	2.63	0	2.63	2.63	0	0	0	0	5.26	0	100												
Walnuts	2.63	0	5.26	5.26	0	7.89	0	18.42	18.42	26.32	0	100											
Cucumbers	5.26	0	60.53	7.89	0	2.63	0	2.63	5.26	0	13.16	2.63	100										
Beef	92.11	2.63	7.89	13.16	0	10.53	0	10.53	13.16	2.63	2.63	2.63	5.26	100									
Kitchen Roll	0	0	0	0	31.58	5.26	31.58	0	0	0	0	0	0	0	100								
Apple Juice	5.26	31.58	2.63	2.63	0	39.47	0	2.63	0	0	2.63	5.26	0	0		100							
Red Wine	2.63	100	0	0	0	23.68	0	0	0	0	0	0	0	2.63	0	31.58	100						
Frozen Pizza	15.79	0	10.53	7.89	0	7.89	0	5.26	10.53	2.63	2.63	2.63	5.26	18.42	0	2.63	0	100					
Body Lotion	0	0	0	0	100	5.26	100	0	0	0	0	0	0	0	31.58	0	0	0	100				
Bread Rolls	13.16	2.63	5.26	15.79	0	28.95	0	44.74	7.89	13.16	0	7.89	2.63	15.79	0	2.63	2.63	5.26	0	100			
Strawberry Jam	5.26	0	5.26	15.79	0	26.32	0	78.95	23.68	42.11	2.63	18.42	2.63	7.89	0	0	0	0	0	47.37	100		
Ice Cream	2.63	0	7.89	2.63	0	0	0	31.58	28.95	52.63	2.63	15.79	2.63	2.63	0	2.63	0	39.47	0	0	39.47	100	
Candles	0	0	0	0	5.26	5.26	5.26	0	0	0	0	0	0	0					5.26	0	0	0	100

Screenshot captured by Markus Ruplitsch on Windows 10, 20.11.2020

CSA

Pro	Contra
Great analytic capabilities.	Not publicly available.
All results can be exported as .csv.	Hard to install for the average user.
	No documentation
	Prone to crashes.
	Physical card sorting or different tool needed.

Simplicity	Documentation	Features	Business Model
0	0	4 (for analyzing)	0

Tool Comparison

Name	Simplicity	Documentation	Features	Business Model	Average
OptimalSort	4	5	5	3	**4.25**
UXtweak	5	4	4	3	**4.00**
ProvenByUsers	4	4	4	1	**3.50**
Casolysis	4	0	4	5	**3.25**
kardSort	5	1	1	5	**3.00**
SynCaps v3	1	2	4	5	**3.00**
xSort	2	2	3	4	**2.75**
CSA	0	0	4	0	**1.00**

Recommendations

Best Allrounder: OptimalSort

Best Bang for your Buck: kardSort + free analyt. tool (Casolysis/SynCaps)

Offline: Paper Cards + SynCaps (Windows)