

1. Short introduction

2. Challenges – Generations

3. How AnswerMiner can be a solution?

4. Data Exploration with AnswerMiner?



AnswerMiner

DATA ANALYSIS MADE EASY

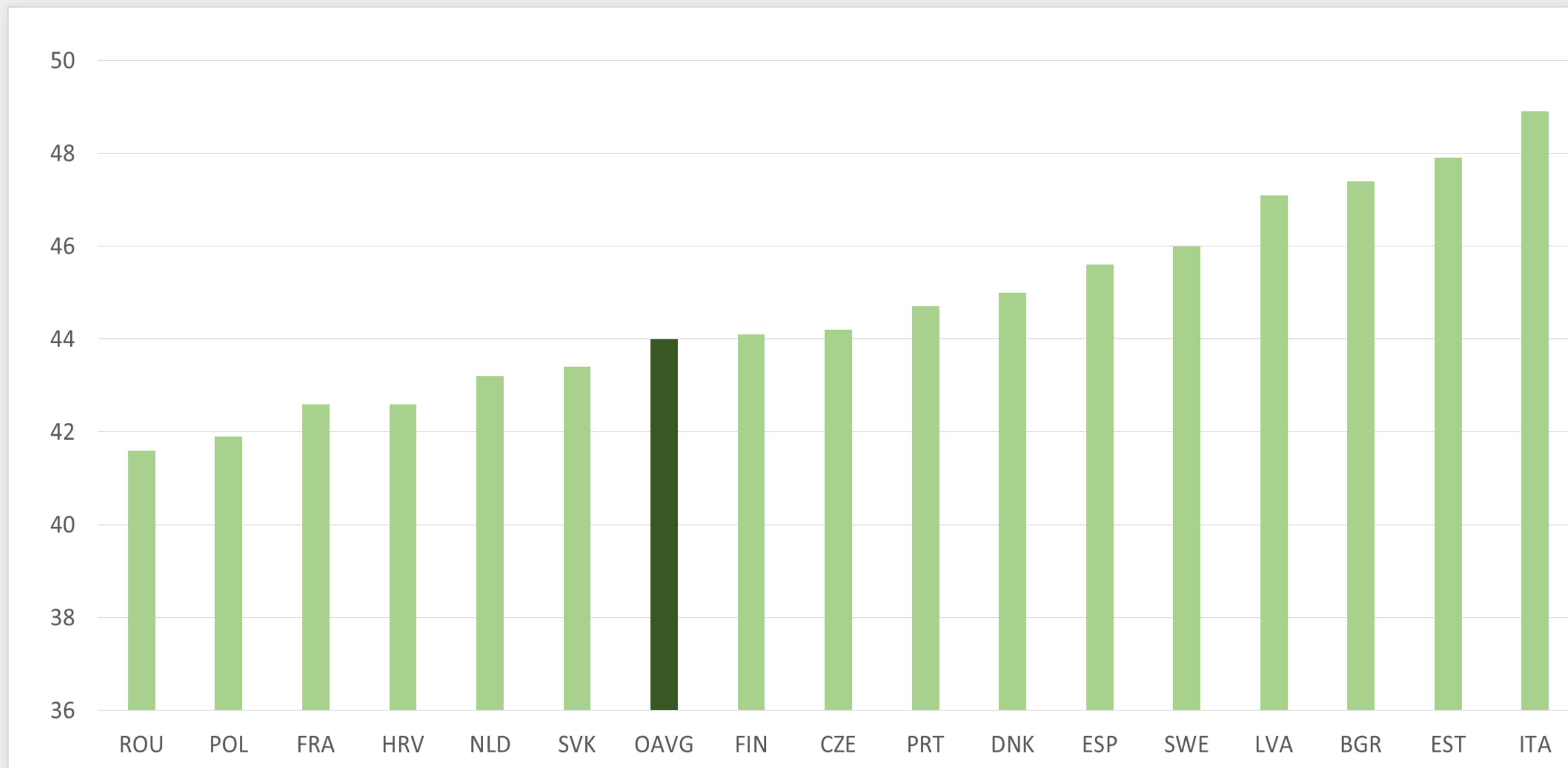
Borbély Bence

<https://www.linkedin.com/in/borbely-bence/>



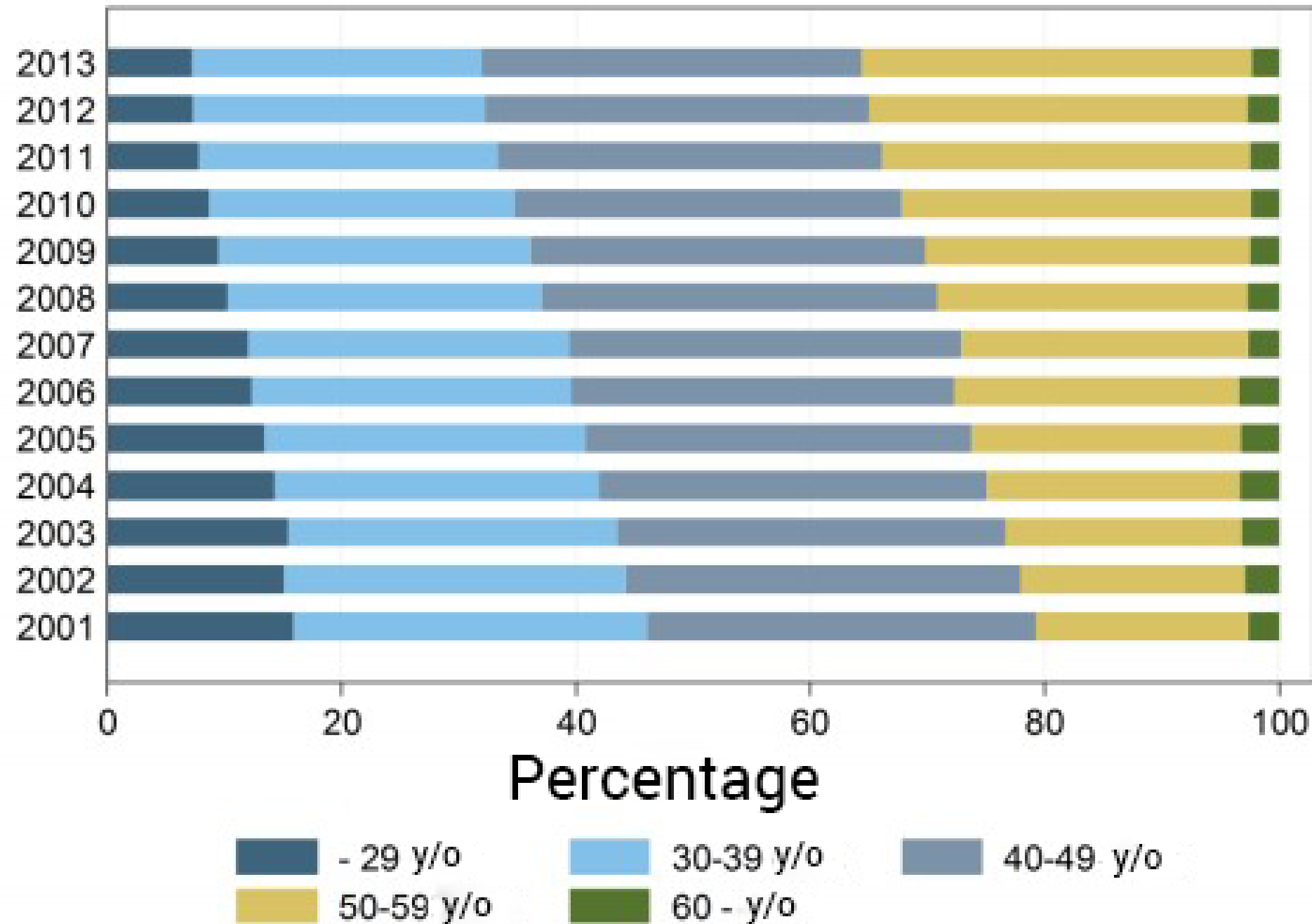


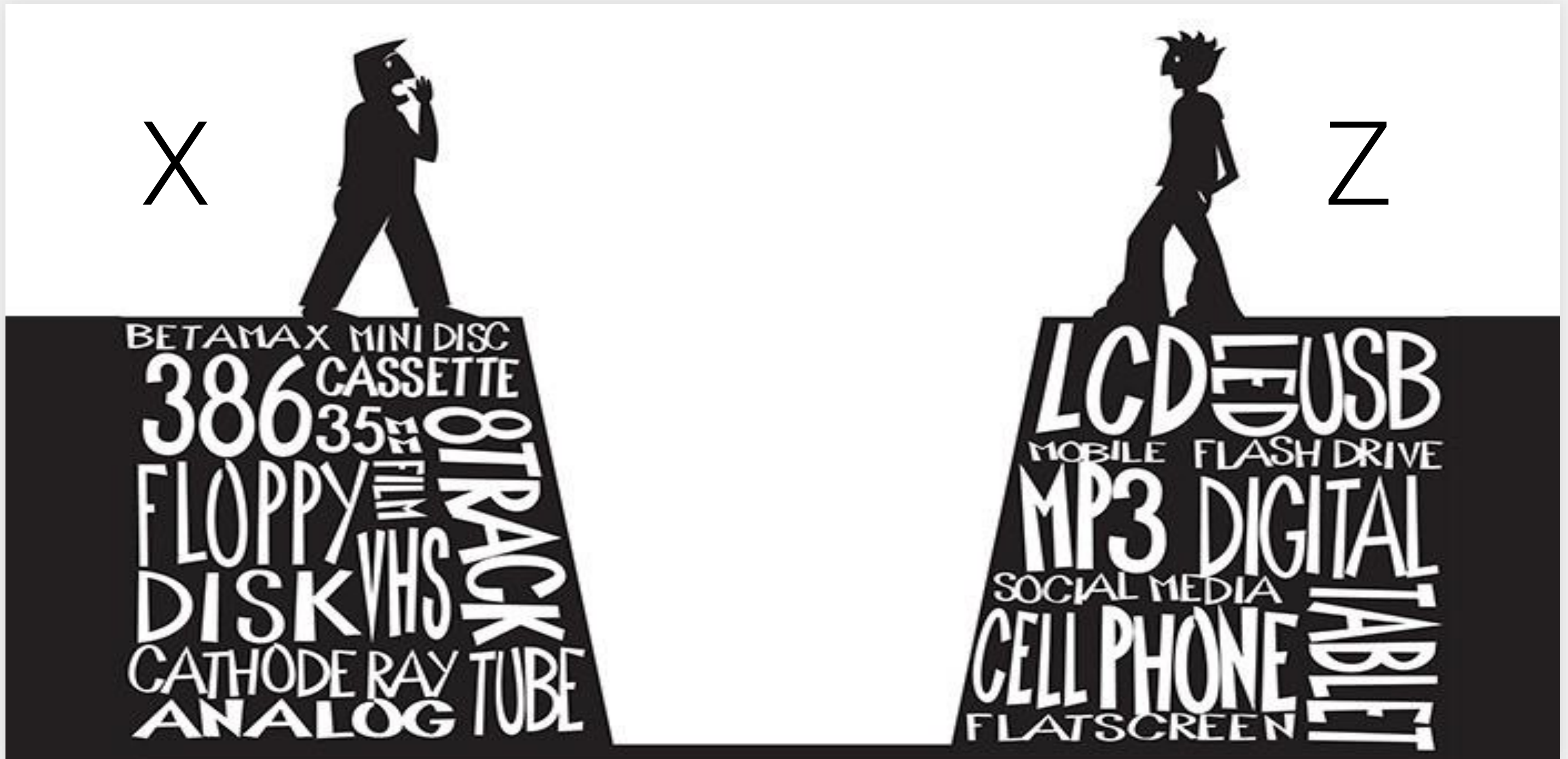
Average Age of Teachers by European Countries with OAVG (2013)



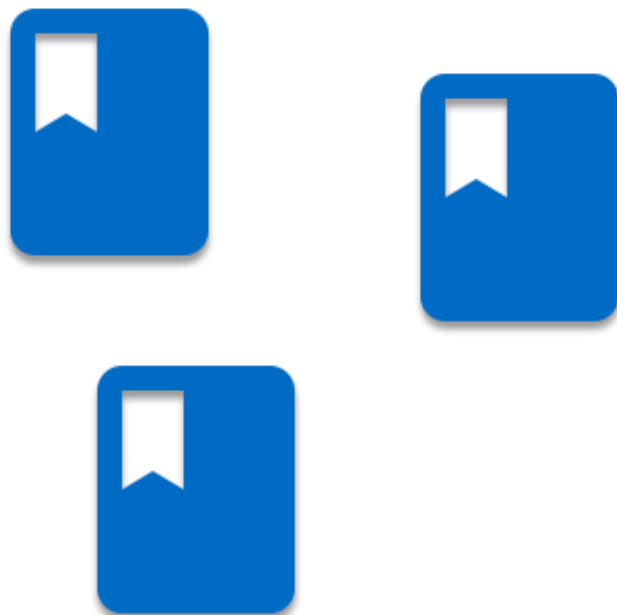


Percentage of educators with different age groups (2001-2013)

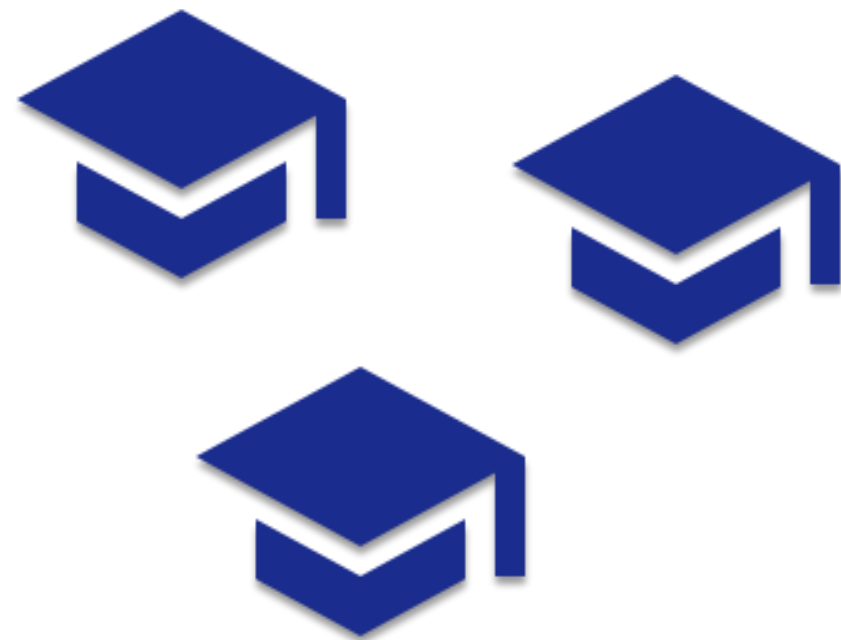




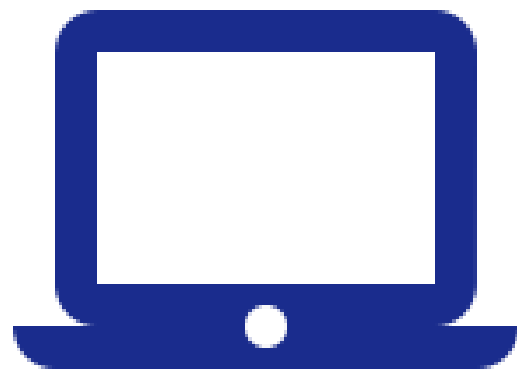
High-School

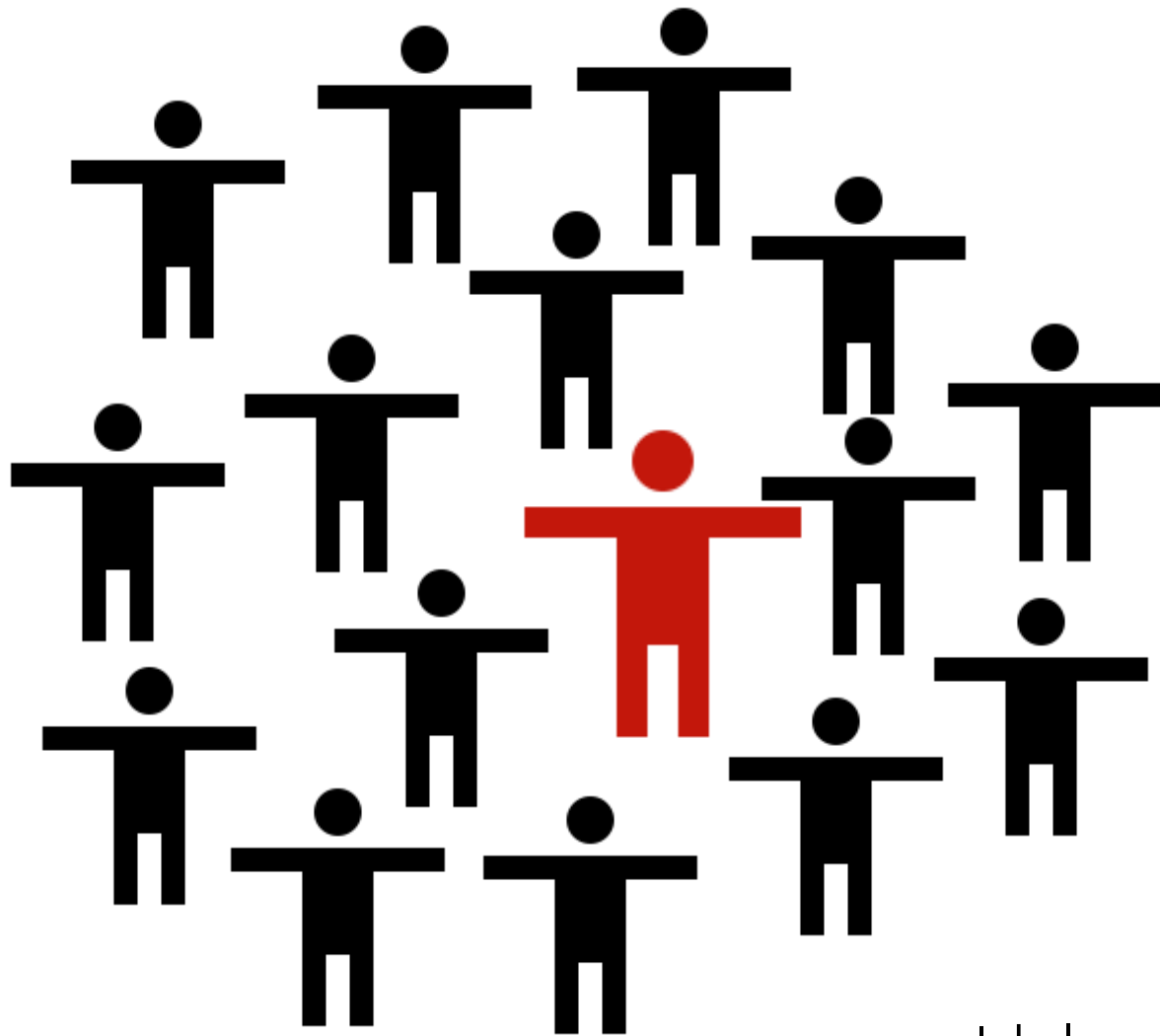


University

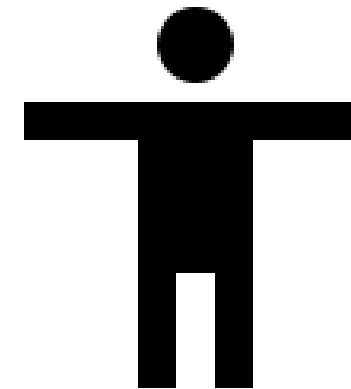
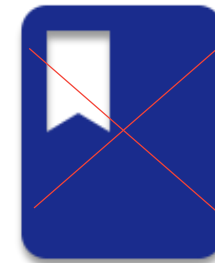


Multitasking



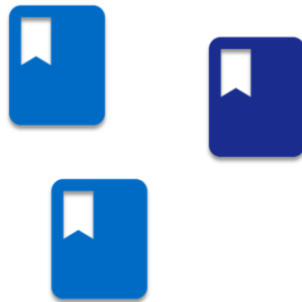


Idols

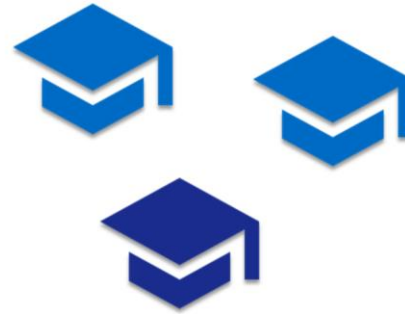


Describe students

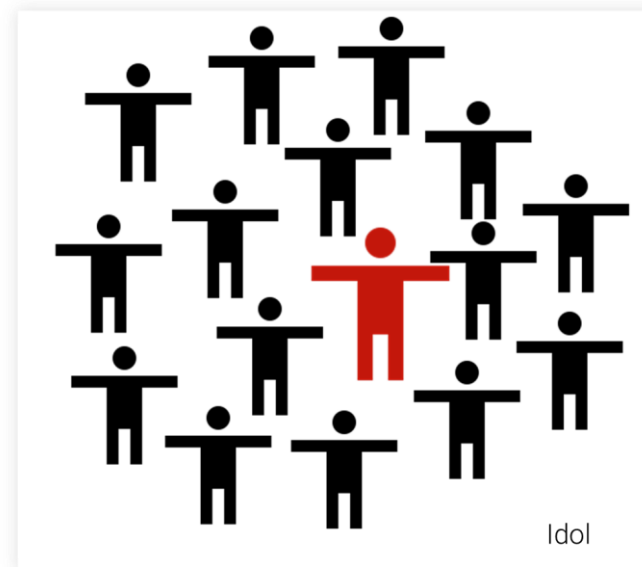
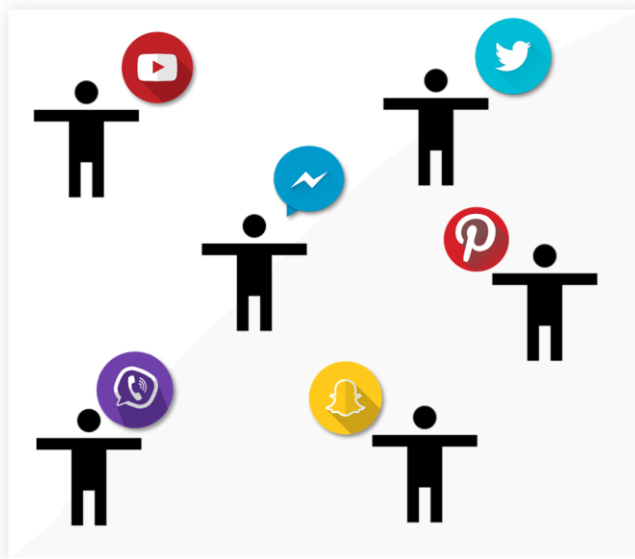
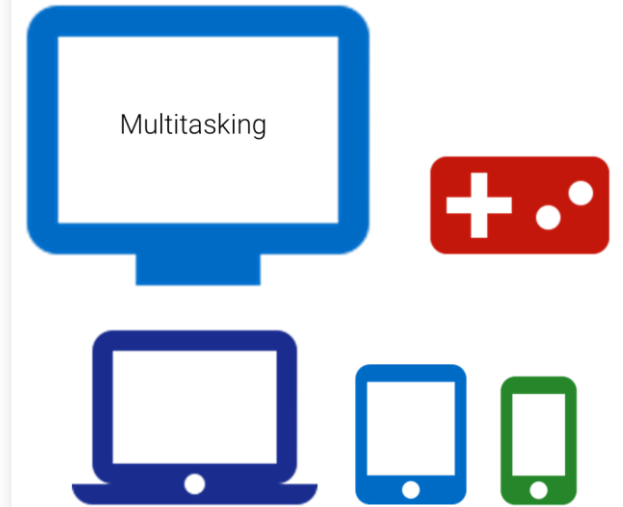
High-School



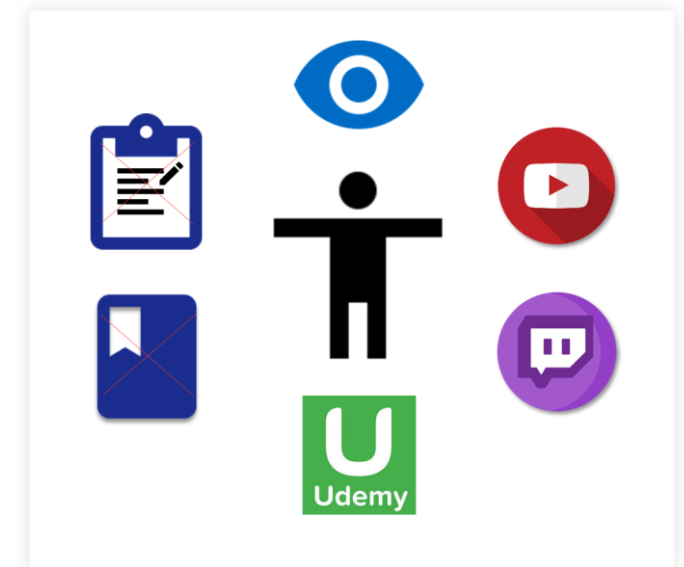
University

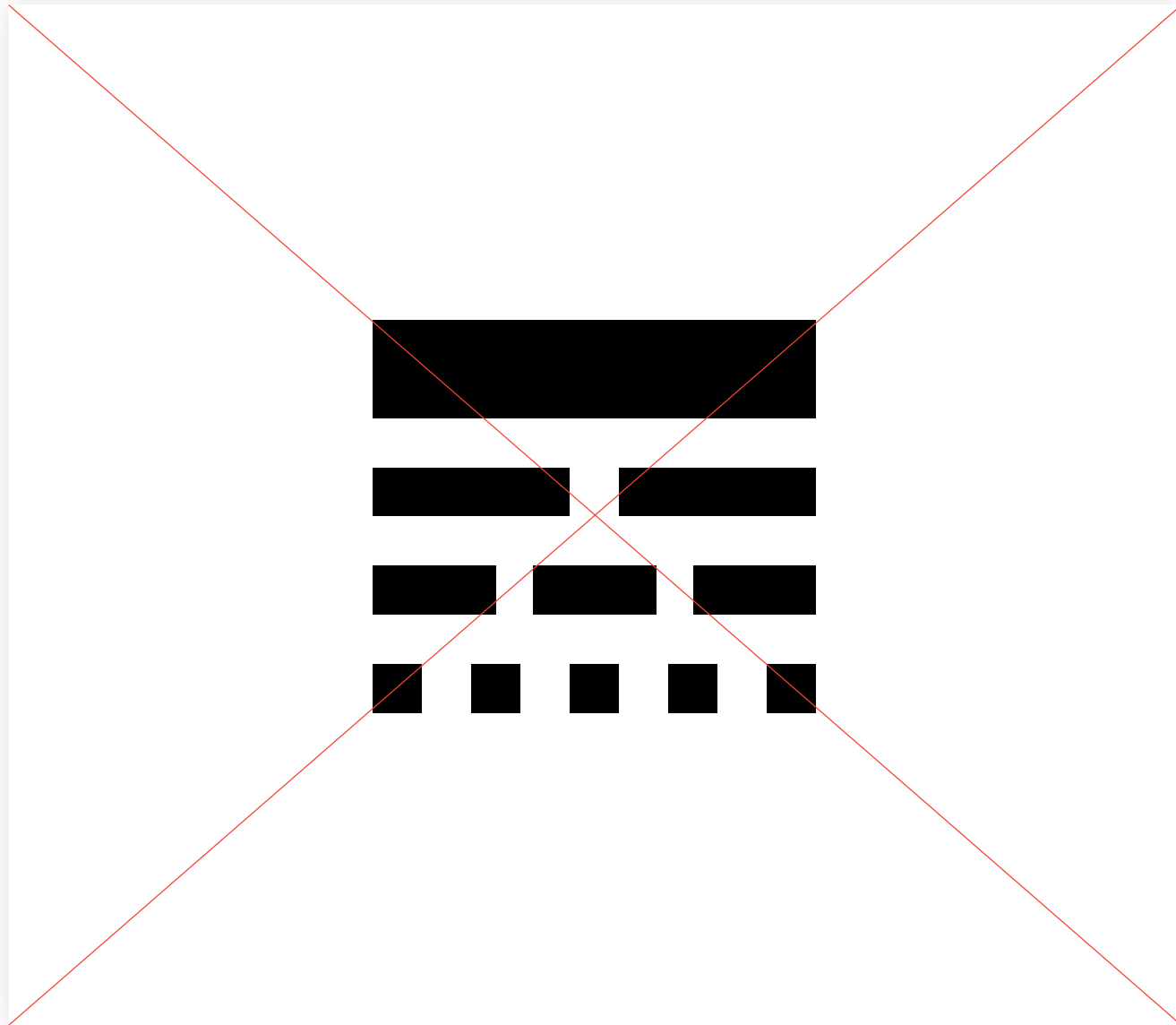


Multitasking



Idol





DESIGN

File Edit Code View Plots Session Project Build Tools Help

Go to file/function

Project: (None)

Workspace History

Import Dataset

Data

Dataset	Observations	Variables
data.cc	245472 obs.	23 variables
data.es	59833 obs.	11 variables
data.es.do	59833 obs.	11 variables
data.ss	353671 obs.	13 variables
data.tm	87573 obs.	10 variables

Values

Variable	Value
temp.plot	gg[9]

```

42 axis.title = element_text(color="#000000", size = 20),
43 legend.title = element_text(size=14),panel.grid.major=element_blank(),panel.grid.minor=element_blank(),
44 legend.text=element_text(size=16),strip.text.x=element_text(size=16, face="bold"))+
45 geom_vline(xintercept=20,linetype="dotted", size=1)+geom_vline(xintercept=24, size=1)+
46 annotate("segment",color="red",x=26,xend=28, y=.11, yend=.11, size=1.2)+
47 annotate("segment",color="green",x=26,xend=28, y=.098, yend=.098,size=1.2)+
48 annotate("segment",color="purple",x=26,xend=28, y=.086,yend=.086, size=1.2)+
49 annotate("segment",color="blue",x=26,xend=28, y=.074, yend=.074, size=1.2)+
50 annotate("text", x = 28.2, y = .11, label = "Elkhorn Slough", hjust=0, vjust=.45, size=7)+
51 annotate("text", x = 28.2, y = .098, label = "San Francisco Bay", hjust=0, vjust=.45, size=7)+
52 annotate("text", x = 28.2, y = .086, label = "Tomaes Bay", hjust=0, vjust=.45, size=7)+
53 annotate("text", x = 28.2, y = .074, label = "South Slough (OR)", hjust=0, vjust=.45, size=7)+
54 annotate("text", x=38.5, y=.025,parse=TRUE, label = "LT[50]", size=8)+
55 annotate("text", x = 1.8, y=.13, label="A", size = 12)+
56 geom_segment(aes(x=38.5, y = .02, xend= 38.5, yend=0), arrow=arrow(length=unit(0.5,"cm")), size=1)+
57 scale_x_continuous(breaks=c(0,5,10,15,20,25,30,35,40))+
58 coord_cartesian(ylim=c(0, 0.15), xlim=c(0,40))
59
60 temp.plot
61
62 #DO Plots####
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```

Console c:/users/Brian/Documents/NERR Collaborative Science/Data/SS/

```

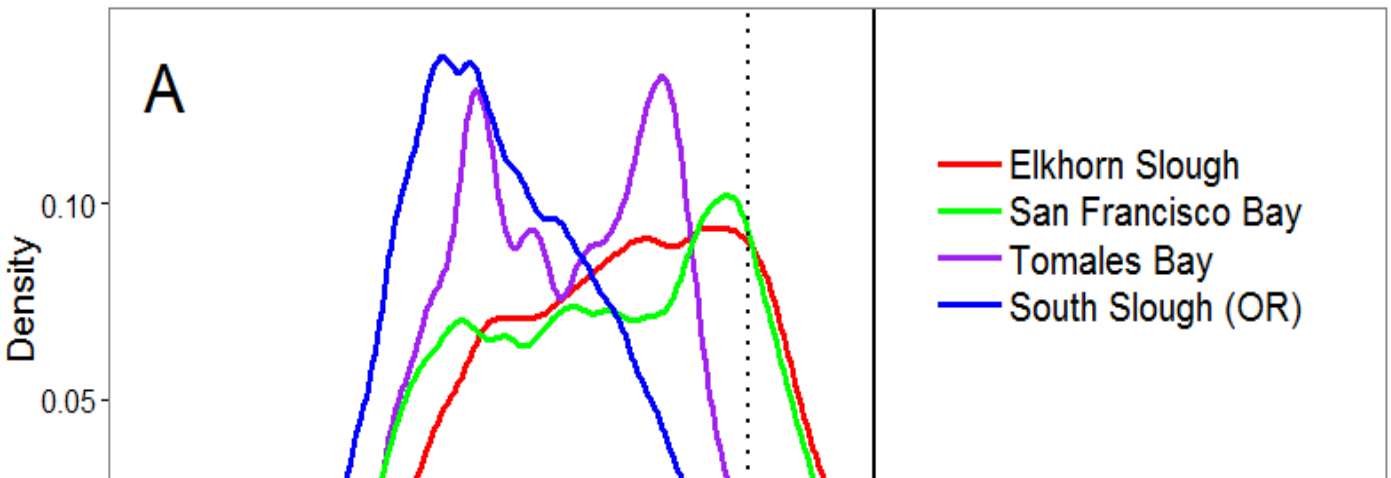
+ geom_line(data=data.cc,aes(x=Temp), color="green",stat="density",size=1.2)+
+ geom_line(data=data.ss,aes(x=Temp), color="blue",stat="density",size=1.2)+
+ ylab("Density")+xlab("Temperature (C)")>theme_bw()+
+ theme(axis.text = element_text(size=16),
+ axis.title = element_text(color="#000000", size = 20),
+ legend.title =
+ element_text(size=14),panel.grid.major=element_blank(),panel.grid.minor=element_blank(),
+ legend.text=element_text(size=16),strip.text.x=element_text(size=16, face="bold"))+
+ geom_vline(xintercept=20,linetype="dotted", size=1)+geom_vline(xintercept=24, size=1)+
+ annotate("segment",color="red",x=26,xend=28, y=.11, yend=.11, size=1.2)+
+ annotate("segment",color="green",x=26,xend=28, y=.098, yend=.098,size=1.2)+
+ annotate("segment",color="purple",x=26,xend=28, y=.086,yend=.086, size=1.2)+
+ annotate("segment",color="blue",x=26,xend=28, y=.074, yend=.074, size=1.2)+
+ annotate("text", x = 28.2, y = .11, label = "Elkhorn Slough", hjust=0, vjust=.45, size=7)+
+ annotate("text", x = 28.2, y = .098, label = "San Francisco Bay", hjust=0, vjust=.45,
size=7)+

```

Files Plots Packages Help

Zoom Export Clear All

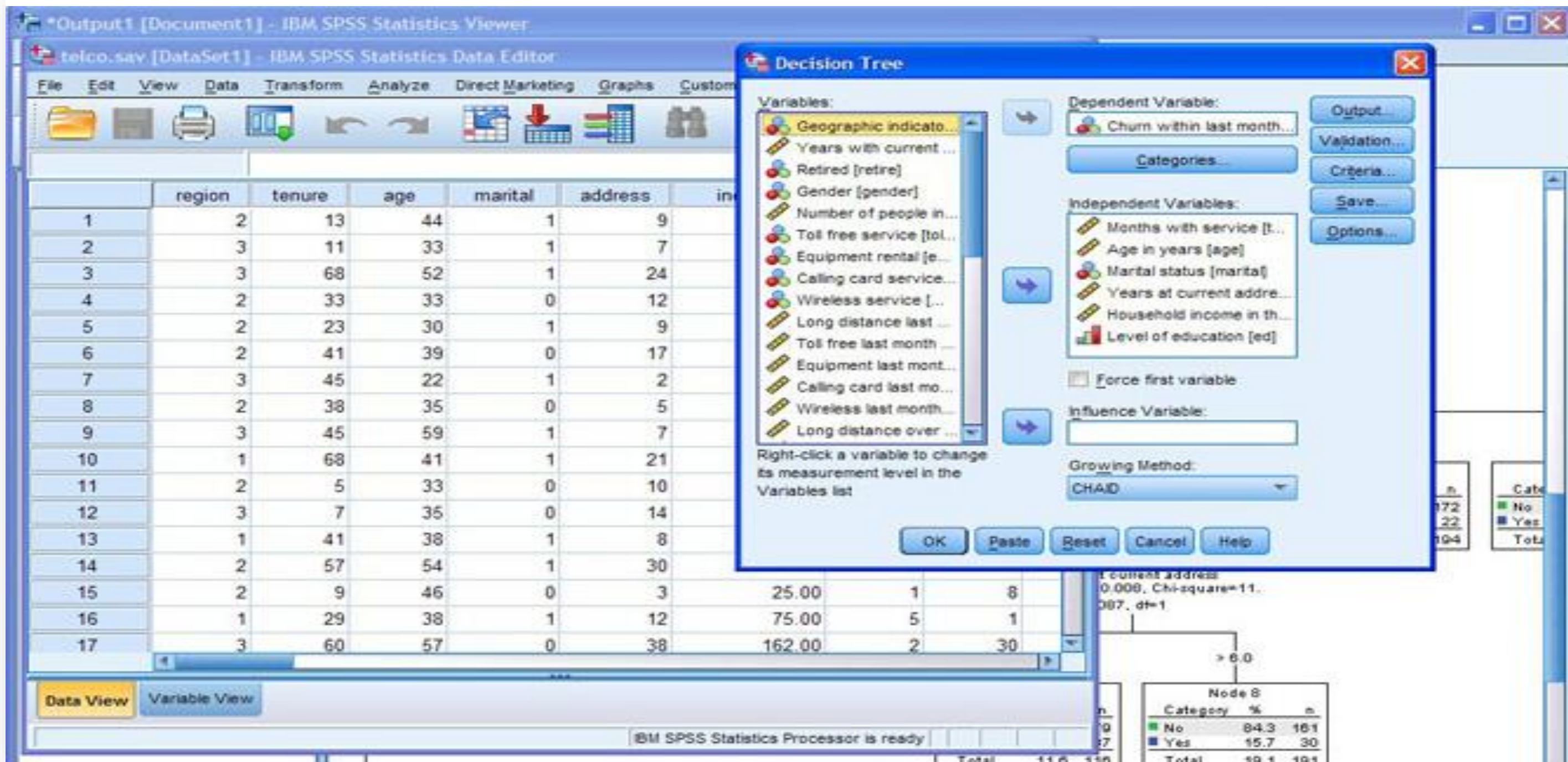
A



Density

Temperature (C)

Elkhorn Slough
San Francisco Bay
Tomaes Bay
South Slough (OR)



The screenshot displays the IBM SPSS Statistics interface. The main window is the 'Data Editor' for a dataset named 'telco.sav'. It shows a table with 17 rows and 7 columns: region, tenure, age, marital, address, and income. The 'Decision Tree' dialog box is open, showing the 'Variables' list on the left and the 'Dependent Variable' as 'Churn within last month...'. The 'Independent Variables' list includes 'Months with service [t...]', 'Age in years [age]', 'Marital status [marital]', 'Years at current address...', 'Household income in th...', and 'Level of education [ed]'. The 'Growing Method' is set to 'CHAID'. The 'Output' button is highlighted.

Data Editor Table:

	region	tenure	age	marital	address	income
1	2	13	44	1	9	
2	3	11	33	1	7	
3	3	68	52	1	24	
4	2	33	33	0	12	
5	2	23	30	1	9	
6	2	41	39	0	17	
7	3	45	22	1	2	
8	2	38	35	0	5	
9	3	45	59	1	7	
10	1	68	41	1	21	
11	2	5	33	0	10	
12	3	7	35	0	14	
13	1	41	38	1	8	
14	2	57	54	1	30	
15	2	9	46	0	3	25.00
16	1	29	38	1	12	75.00
17	3	60	57	0	38	162.00

Decision Tree Dialog Box:

- Variables:** Geographic indicato..., Years with current ..., Retired [retire], Gender [gender], Number of people in..., Toll free service [tol..., Equipment rental [e..., Calling card service..., Wireless service [...], Long distance last ..., Toll free last month ..., Equipment last mont..., Calling card last mo..., Wireless last month..., Long distance over ...
- Dependent Variable:** Churn within last month...
- Independent Variables:** Months with service [t..., Age in years [age], Marital status [marital], Years at current addre..., Household income in th..., Level of education [ed]
- Force first variable:** ☐
- Influence Variable:**
- Growing Method:** CHAID

Node 8 Table:

Category	%	n
No	84.3	161
Yes	15.7	30
Total	100.0	191

responses - Excel

FÁJL

KEZDŐLAP

BESZÚRÁS

LAPELRENDEZÉS

KÉPLETEK

ADATOK

VÉLEMÉNYEZÉS

NÉZET

Access-fájlból

Weblapról

Szövegből

Egyéb adatforrásból

Meglévő kapcsolatok

Az összes frissítése

Kapcsolatok

Tulajdonságok

Hivatkozások

Rendezés

Szűrő

Szűrők törlése

Újból alkalmaz

Speciális

Szövegből oszlopok

Villámkitöltés

Ismétlődések eltávolítása

Érvényesítés

Összesítés

Lehetőségelemzés

Kapcsolatok

Csoportosítás

Csoportbontás

Részösszeg

Részletek megjelenítése

Részletek elrejtése

Tagolás

A1

✕

✓

fx

Music

	DR	DS	DT	DU	DV	DW	DX	DY	DZ	EA	EB	EC	ED	EE	EF	EG	EH	EI	EJ	EK	EL	EM	EN	EO	EP	EQ	ER	ES	ET
1	Unpopula	Life strugg	Happiness	Energy lev	Small - big	Personalit	Finding lo	Getting up	Interests	Parents' a	Questionn	Internet u	Finances	Shopping	Branded c	Entertainr	Spending	Spending	Spending	Age	Height	Weight	Number o	Gender	Left - right	Education	Only child	Village - t	House - bloc
2	5	1	4	5	1	4	3	2	3	4	3	few hours	3	4	5	3	3	1	3	20	163	48	1	female	right hand	college/bi	no	village	block of flats
3	4	1	4	3	5	3	4	5	3	2	3	few hours	3	4	1	4	2	5	2	19	163	58	2	female	right hand	college/bi	no	city	block of flats
4	4	4	4	4	3	3	3	4	5	3	1	few hours	2	4	1	4	3	4	2	20	176	67	2	female	right hand	secondary	no	city	block of flats
5	3	3	2	2	1	2	1	1		2	4	most of th	2	4	3	3	4	4	1	22	172	59	1	female	right hand	college/bi	yes	city	house/bunge
6	5	2	3	5	3	3	2	4	3	3	3	few hours	4	3	4	3	3	2	4	20	170	59	1	female	right hand	secondary	no	village	house/bunge
7	4	3	3	4	4	3	3	3	5	3	4	few hours	2	3	3	3	1	4	4	20	186	77	1	male	right hand	secondary	no	city	block of flats
8	3	5	5	4	3	3	2	2	4	4	5	less than a	4	3	1	3	4	1	5	20	177	50	1	female	right hand	secondary	no	village	house/bunge
9	2	2	4	4	3	4	2	5	4	3	3	few hours	3	4	4	4	4	3	2	19	184	90	1	male	right hand	college/bi	no	city	house/bunge
10	5	4	3	1	5	3	5	5	1	4	3	few hours	2	1	3	2	1	3	4	18	166	55	1	female	right hand	secondary	no	city	house/bunge
11	3	5	4	4	1	3	3	4	3	3	3	few hours	4	4	4	2	3	2	4	19	174	60	3	female	right hand	secondary	no	city	block of flats
12	3	5	4	3	2	3	2	4	3	4	4	less than a	2	4	2	3	4	2	2	19	175	60	2	female	left hand	secondary	no	city	block of flats
13	2	4	3	3	1	3	3	5	4	4	4	few hours	2	2	1	3	1	1	2	17	176	60	1	female	right hand	primary sc	no	city	block of flats
14	2	5	4	3	4	3	1	3	2	4	2	few hours	4	1	1	2	3	2	3	24	168	55	10	female	right hand	college/bi	no	city	block of flats
15	3	4	4	4	5	4	2	5	5	3	2	few hours	3	5	2	3	4	3	3	19	165	55	1	female	right hand	secondary	no	city	block of flats
16	3	5	5	4	1	4	3	1	2	4	3	most of th	5	3	1	5	5	1	4	22	175	57	1	female	right hand	college/bi	no	city	block of flats
17	3	4	2	4	5	3	2	3	3	4	4	few hours	3	3	1	3	3	5	5	18	177	77	0	male	right hand	secondary	yes	city	block of flats
18	3	4	4	4	2	3	2	4	4	3	1	few hours	3	4	4	3	3	3	3	19	175	65	2	female	right hand	college/bi	no	city	block of flats
19	4	5	2	2	3	2	2	2	4	1	3	few hours	1	5	2		2	2	5	20	168	65	1	female	right hand	secondary	no	village	house/bunge
20	3	1	3	3	4	3	2	2	4	3	2	few hours	4	2	4	4	4	5	4	18	181	78	2	male	right hand	secondary	no	city	house/bunge
21	2	1	4	3	4	5	1	5	4	2	3	few hours	2	3	4	4	3	3	3	18	188	90	1	male	left hand	secondary	no	city	house/bunge
22	3	4	3	4	4	3	4	3	5	3	4	few hours	2	3	3	2	2	4	4	20	186	77	1	male	right hand	secondary	no	city	block of flats
23	5	2	4	5	5	3	1	5	5	3	4	few hours	2	1	1	1	1	2	2	24	186	85	1	male	left hand	secondary	no	city	block of flats
24	3	4	3	4	3	4	2	4	3	3	2	few hours	5	2	1	2	2	4	4	22	167	70	1	female	right hand	college/bi	no	city	house/bunge
25	4	4	4	2	3	4	5	5	3	2	4	few hours	2	3	4	3	4	2	4	20	168	54	3	female	right hand	secondary	no	city	block of flats
26	5	5	2	4	1	3	4	5	5	4	5	few hours	3	5	5	4	5	5	5	19	167	51	1	female	right hand	secondary	no	city	block of flats
27	4	5	4	3	1	3	2	2	2	4	3	few hours	2	5	1	3	3	1	2	20	170	56	1	female	right hand	secondary	yes	city	block of flats
28	3	4	4	3	5	4	3	4	5	5	4	few hours	5	4	4	4	4	4	3	22	165	63	1	female	left hand	college/bi	no	city	house/bunge
29	2	3	3	3	1	3	3	1	3	4	2	few hours	3	4	3	3	3	2	3	19	163	50	1	female	right hand	secondary	no	city	house/bunge
30	4	1	5	5	5	5	2	5	5	3	1	few hours	3	4	5	3	4	1	5	20	187	80	2	male	left hand	secondary	yes	village	house/bunge
31	5	5	4	4	2	4	3	4	4	3	3	few hours	4	3	1	4	3	2	4	19	168	60	2	female	right hand	secondary	no	village	block of flats
32	5	3	4	3	3	3	2	3	4	3	3	few hours	2	3	5	4	4	4	4	25	183	87	1	male	right hand	secondary	no	city	block of flats
33	3	4	4	4	3	3	3	3	3	3	2	less than a	4	3	3	2	2	2	2	22	177	80	1	female	right hand	secondary	no	city	block of flats
34	3	3	4	5	1	4	1	5	5	3	3	few hours	1	3	1	4	5	1	1	20	158	46	4	female	left hand	secondary	no	city	block of flats





Design

Dataset

Story

Exploration

1. Getting started - www.youtube.com/watch?v=q6sNqDKCdrs

2. Import Dataset – „Young People Survey”

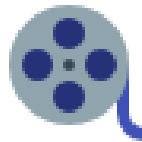
3. Dataset Settings

4. Explore in AnswerMiner – Smart Data View

Music
Preferences
(19)



Movie
Preferences
(12)



Hobbies,
Interests
(32)



Phobias
(10)



Health Habits
(3)



Personality,
Views of life &
Opinion
(57)



Spending Habits
(7)



Demographics
(10)



1. Select only demographic data

2. Sort by height

3. Filter only female

3.1 Master degree

4. How tall is the heaviest man?

4.1 Is he left or right handed?

5. Describe them by... (mean, median, min-max, outlier)

5.1 Age

5.2 Height

5.3 Weight

5.4 Gender

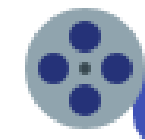
1. Select only music preferences



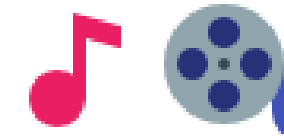
2. Find groups by music preferences



3. Find groups by movie preferences



4. Find groups by music and movie prefs



5. Explore new groups

1. Height and Weight?

2. Gender and Alcohol?

3. Age and Alcohol?

4. Pick any columns and describe

1. Do women fear certain phenomena significantly more than men?

2. Do the left handed people have different personal views of life than right handed?

3. Gender+All?

4. Left or Right Hand +All?



AnswerMiner

DATA ANALYSIS MADE EASY

<https://www.answerminer.com/>