



Store data – store muligheter: datavisualisering av et semester

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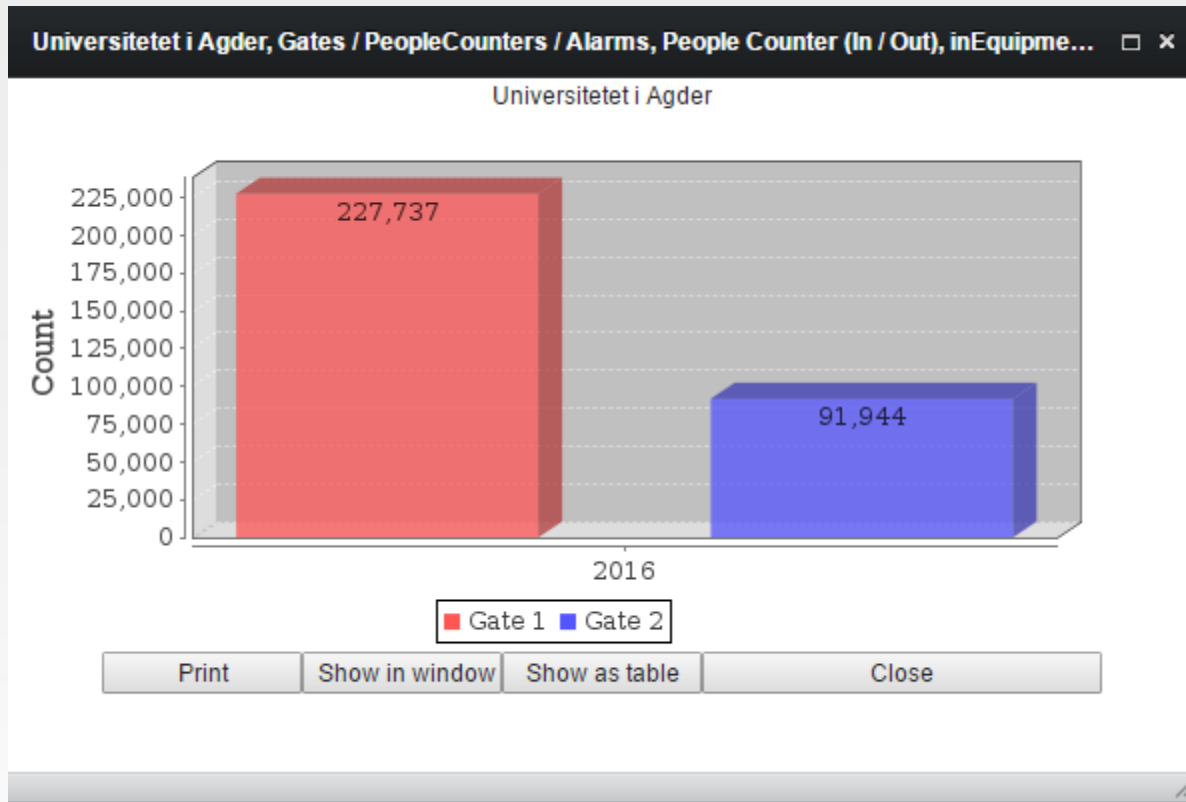
Universitetsbiblioteket i Agder

Virak-konferansen 2019, sesjon Teknologi og automatisering





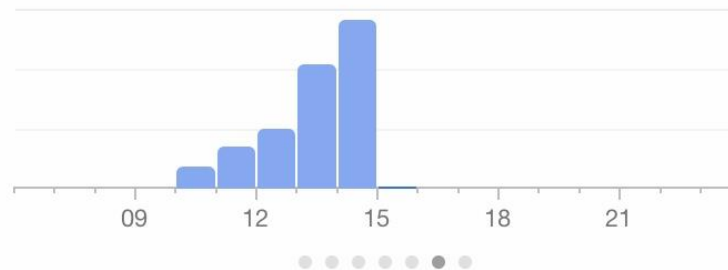
Augland, T. (ukjent år)





Utgangspunkt

POPULÆRE TIDSPUNKTER lørdager ▾ ?



PLANLEGG BESØKET DITT

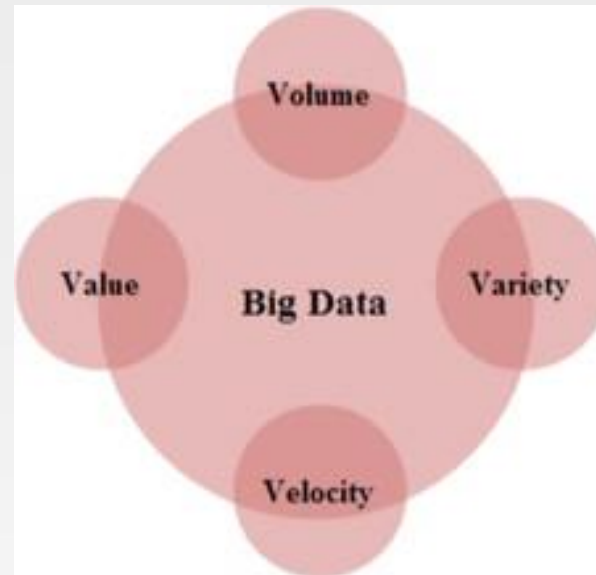


Folk tilbringer vanligvis **15 min.** her



Mer om Vinmonopolet





Hashem, I. A. T., Yaqoob, I., Anuar, N. B., Mokhtar, S., Gani, A. & Ullah Khan, S. (2015). The rise of “big data” on cloud computing: Review and open research issues. *Information Systems*, 47, 98-115. <https://doi.org/https://doi.org/10.1016/j.is.2014.07.006>





Datakilder





Datakilder

- ✓ **Primo back office (Ex Libris)**
- ✓ **Bibliotheka Smartadmin**
- ✓ **Google Analytics**

- × Fronter
- × Tidsskriftdatabaser
- × Kildekompasset
- × Alma Analytics (Ex Libris)



Deviation

Emphasize variance (+/-) from a fixed reference point. Typically the reference point is zero but it can also be a target or a high-level average. Can also be used to show sentiment (good/bad news report).

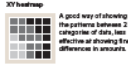
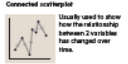
Example FT use
Trade expectations, share change



Correlation

Show the relationship between two or more variables. Be explicit that, unless you tell them otherwise, you're not trying to measure the relationship but you show them to be causal (i.e. one causes the other).

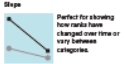
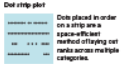
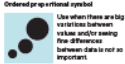
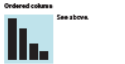
Example FT use
Inflation and unemployment, income and life expectancy



Ranking

Use when an item position is as critical as its value. It's more important than its absolute or relative value. Don't be afraid to highlight the source of interest, or equality in the data.

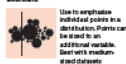
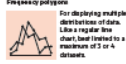
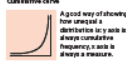
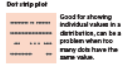
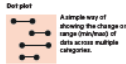
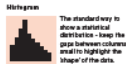
Example FT use
Health deprivation, league tables, constituency election results



Distribution

Show when a dataset and how often they occur. The choice for 'bins' of a distribution can be a reasonable way of highlighting the diversity or equality in the data.

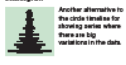
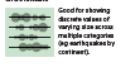
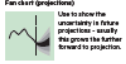
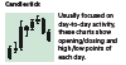
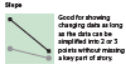
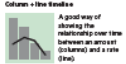
Example FT use
Income distribution, population (age/sex) distribution, revealing inequality



Change over Time

Give emphasis to changing trends. These can be best highlighted by movements or extended series (increasing, decreasing or constant).

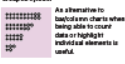
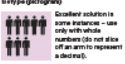
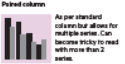
Example FT use
Share price movements, economic time series, sectoral changes in a market



Magnitude

Show size comparisons. These can be either best highlighted by size (larger/smaller) or absolute (lead to see the difference). Use these where a 'counted number' (for example, barrels, dollars or people) rather than a calculated rate or per cent.

Example FT use
Country production, market capitalisation, volume in general



Part-to-whole

Show how a single entity can be broken down into its component elements. If the reader is interested in only the size of the components, consider a magnitude-type chart instead.

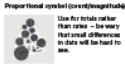
Example FT use
Fiscal budgets, company structures, country-level results



Spatial

Aside from location maps only used when precise location or geographical patterns in data are more important to the reader than anything else.

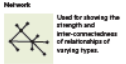
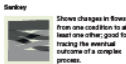
Example FT use
Population density, natural resource locations, natural disaster distribution, election results



Flow

Show the reader volume or intensity of movement between two or more states or conditions. These might be logical sequences or geographical locations.

Example FT use
Movement of funds, trade, migrants, flows in information relationship graphs



Visual vocabulary

Designing with data

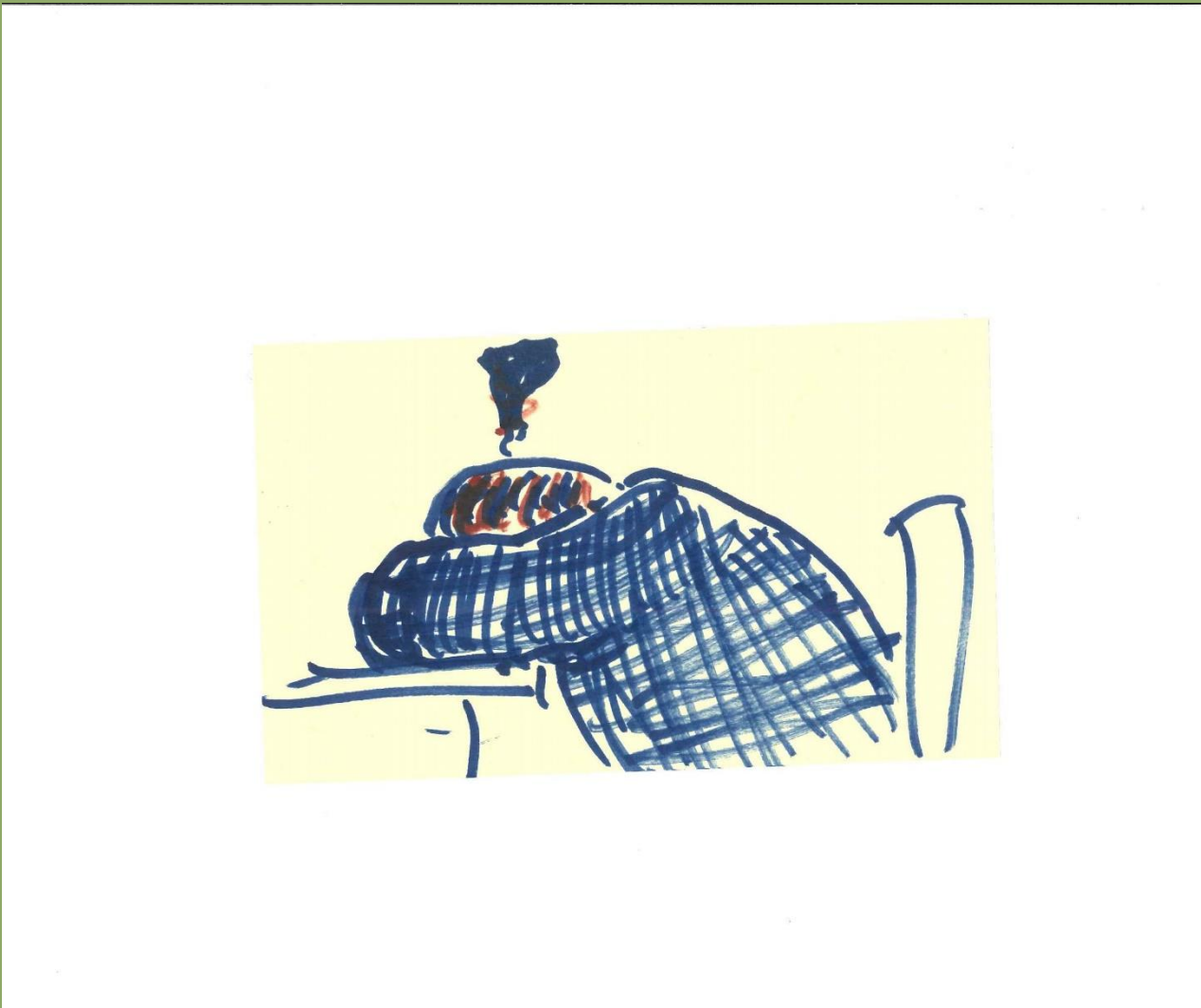
There are so many ways to visualise data - how do we know which one to pick? Use the categories across the top to decide which data relationship is most important in your story, then look at the different types of chart within the category to form some initial ideas about what might work best. This list is not meant to be exhaustive, nor a wizard, but is a useful starting point for making informative and meaningful data visualisations.

FT graphics: Alex Smith, Chris Campbell, Alex East, Lisa Murray, Graham Wainwright, Andy Whiting, Deborah, Paul and Neil Allen, Martin Miles. Inspiring the insight continues to drive our data and research efforts.

ft.com/vocabulary



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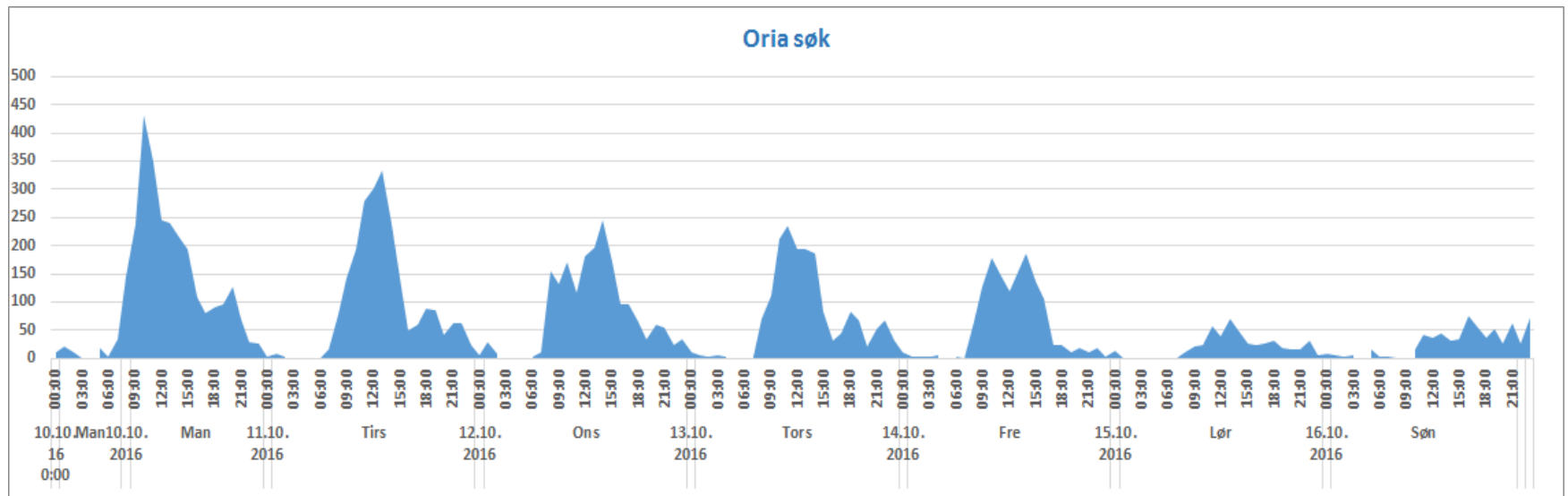


Augland, T. (ukjent år)



Resultat

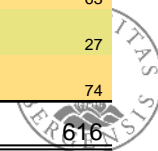






Oria-søk

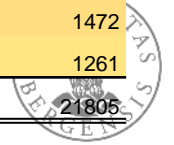
	Man	Tir	Ons	Tor	Fre	Lør	Søn
00:00	11	4	6	11	11	13	7
01:00	20	8	28	5	3	1	5
02:00	11	3	9	3	3	0	3
03:00	1	0	0	5	2	1	5
04:00	0	0	3	2	5	0	0
05:00	18	1	0	0	0	5	15
06:00	2	1	2	0	2	0	2
07:00	33	15	11	2	1	1	2
08:00	144	78	155	70	66	11	1
09:00	239	142	131	112	127	22	0
10:00	432	195	170	213	178	25	17
11:00	349	279	116	235	150	58	41
12:00	245	303	182	194	120	40	37
13:00	241	333	197	193	152	70	44
14:00	214	238	246	185	186	49	31
15:00	195	143	170	84	138	26	34
16:00	110	49	96	31	106	23	75
17:00	81	61	95	45	24	26	58
18:00	90	87	65	83	23	32	36
19:00	95	86	35	67	10	19	53
20:00	128	43	59	22	18	16	26
21:00	71	63	54	53	10	15	63
22:00	29	63	25	67	18	32	27
23:00	26	25	34	32	2	5	74





**Besøk
UiA
nettsider**

	Man	Tirs	Ons	Tors	Fre	Lør	Sønd
00:00	692	557	697	606	668	413	495
01:00	352	296	384	280	296	353	268
02:00	196	150	221	98	141	136	273
03:00	93	96	91	84	96	121	59
04:00	71	62	94	100	126	80	123
05:00	168	87	106	131	152	54	54
06:00	310	251	203	231	180	72	96
07:00	807	918	699	681	722	292	190
08:00	2948	2830	2766	2368	2232	399	188
09:00	4687	3911	3309	3596	2562	447	528
10:00	4528	4390	3630	3693	3015	755	703
11:00	3973	3707	3326	3451	2660	833	1120
12:00	4428	4040	3748	3391	2926	753	1255
13:00	3673	3930	3453	3451	2853	859	1507
14:00	3445	3424	3184	2999	2223	714	1573
15:00	2996	2771	2505	2364	1640	774	1180
16:00	2229	1960	2068	1502	1059	751	1381
17:00	2276	2008	1595	1339	1109	655	1399
18:00	1430	1750	1477	1405	892	604	1520
19:00	1943	1765	1710	1648	754	754	1499
20:00	1780	1737	1644	1394	965	832	1823
21:00	2027	1848	1658	1563	995	708	1838
22:00	1816	1750	1520	1283	775	689	1472
23:00	1354	1019	1185	1179	618	599	1261
Total	47530	45257	41273	38837	29659	12647	21305





Registrerte **besøk** registrert medio august – medio desember (gjennomsnitt timenivå)

Klokkeslett	Man	Tirs	Ons	Tors	Fre	Lør
8-	143	125	145	148	122	
9-	140	173	143	131	120	28
10-	184	228	200	200	122	20
11-	220	277	267	207	147	15
12-	221	260	229	223	132	19
13-	180	200	197	160	137	26
14-	177	196	177	174	176	21
15-	120	146	128	111	87	3
16-	90	86	62	84	32	
17-	55	55	28	40	33	
18-	33	30	36	18		
19-	15	19	74	21		
Sum	1579	1797	1687	1517	1108	132





Utlån på automat medio august – medio desember (gjennomsnitt timenivå)

Klokkeslett	Man	Tirs	Ons	Tors	Fre	Lør	Søn
8-	7	7	4	5	6		
9-	8	6	10	8	9	1	
10-	12	11	10	14	11	4	1
11-	13	15	13	15	16	3	1
12-	17	21	17	13	12	4	4
13-	15	16	17	12	18	4	1
14-	18	19	15	12	16	8	2
15-	16	14	16	16	12	6	1
16-	10	9	8	10	9	4	2
17-	7	6	6	9	5	7	5
18-	3	2	2	4	1	2	
19-	5	6	5	5	6		
Sum	132	131	123	123	120	44	17





Metodiske begrensinger



Created by misirlou
from Noun Project



Praktisk anvendelse



Created by Tawny Whatmore
from Noun Project

- ? Når bør vi øke bemanningen i skrankene
- ? Hva er konsekvensen av at utlånsautomaten er i ustand akkurat denne uken
- ? Kan vi ha ubemannet skranke før kl 11
- ? Er det behov for døgnåpent bibliotek
- ? Hva er konsekvensen av at Oria er ustabil
- ? Hvilket trykk kan vi forvente neste uke
- ? Når bør kurs i litteratursøking være avviklet

Obsvarelse 10.-15.mars [eksempel]

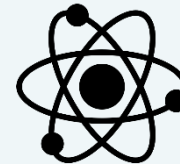


7400 besøk (+20%)
Tirsdag form. blir mest travel



Created by AllTypes®
from Noun Project

2300 utlån (+15%)
Mandag mest travel



13000 søk i Oria(+10%)
Mandag søkes det mest



Created by A.M.A.N.
from Noun Project

16 000 nedlastinger
(+25%)



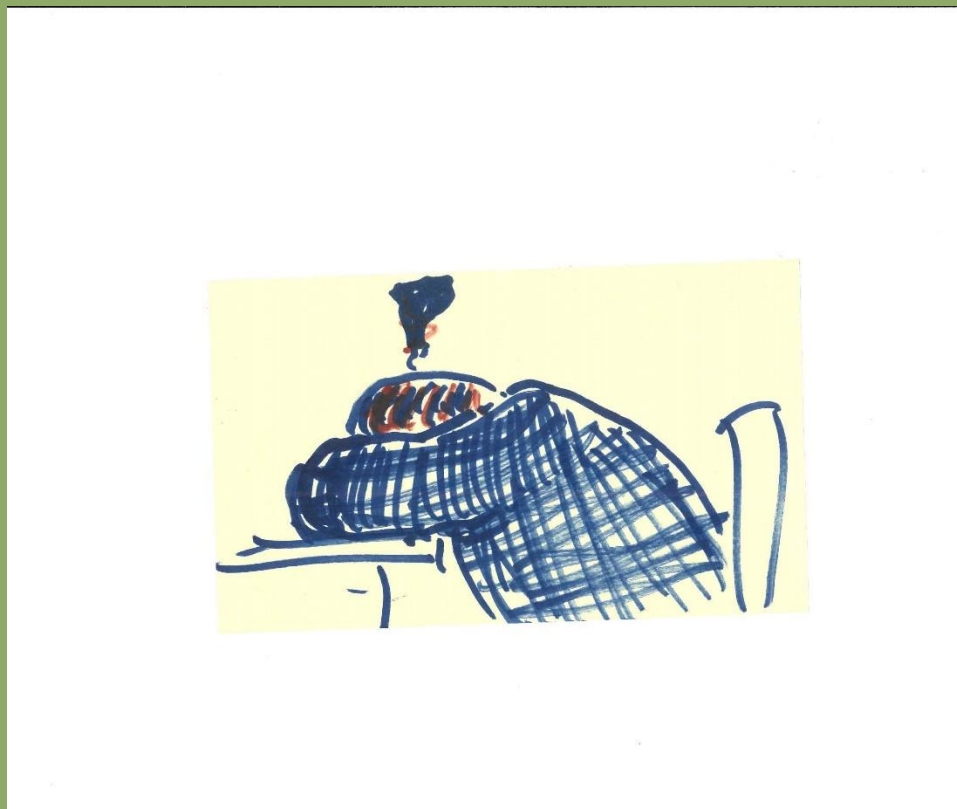
Created by Daniel Falk
from Noun Project

750 retur (-10%)
Torsdag mest travel



Created by shaohui's singh
from Noun Project

230 (+13%)
*Fjernlånsbestillinger
Tirsdag mest travel*



Fortsatt Augland, T. (ukjent år)



Alle ikon hentet fra the Noun Project

 henry.langseth@uib.no





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