



Introduction to methods in digital humanities

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Today's outline

- Background notice
- Which of the digital humanities do methods relate to
- Course outline: three viewpoints into methods in digital humanities
- Practicalities
- Questionnaire



Background notice

- Target audience: people of all levels in the humanities interested in digital methods
- Prerequisites: absolutely none



**Which of the digital humanities do
methods relate to?**



Digital humanities as humanities computing

The digital humanities comprise the study of what happens at the intersection of **computing tools** with cultural artefacts of all kinds. This study begins where basic familiarity with standard software ends. It probes how these common **tools** may be used to make new knowledge from our cultural inheritance and from the contemporary world. It equips students to analyze problems in terms of **digital methods**, choose those best for the job at hand, apply them creatively and assess the results. It teaches students to use **computing as an instrument** to investigate how we know what we know, hence to strengthen and extend our knowledge of the world past and present.

- Center for Computing in the Humanities. "Introduction to the Digital Humanities". King's College London. Accessed 19 February 2010.



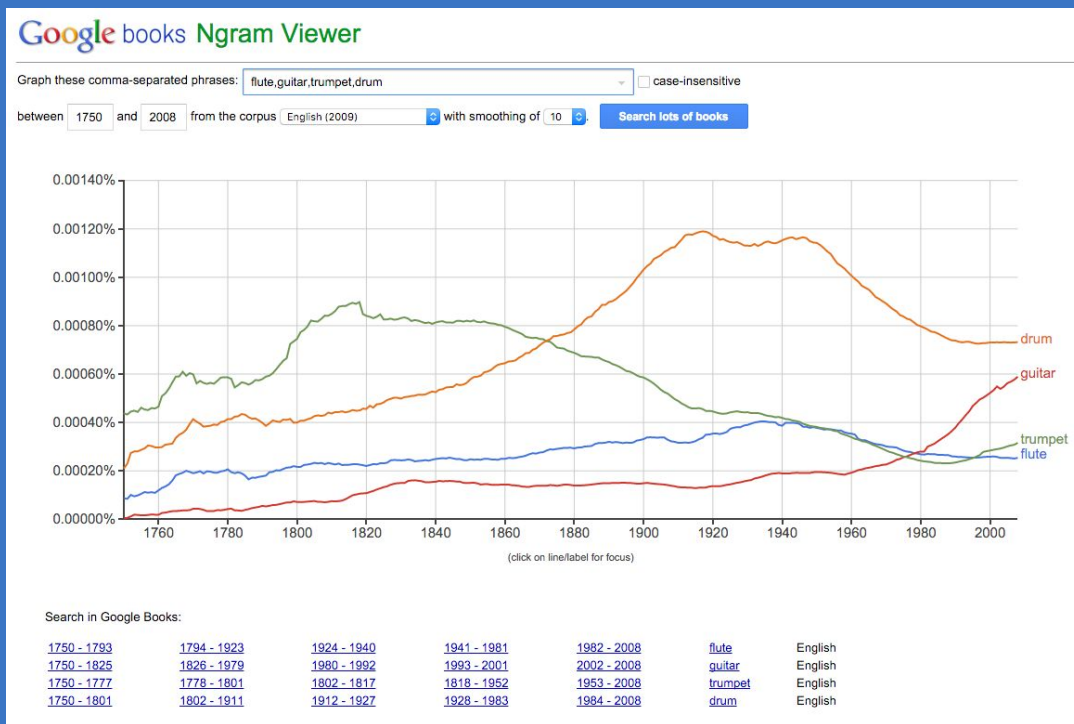
Digital humanities as the programming humanist

Do you have to know how to code? I'm a tenured professor of digital humanities and I say "yes." So if you come to my program, you're going to have to learn to do that eventually.

- Stephen Ramsay: Who's In and Who's Out, position paper at the "History and Future of Digital Humanities" panel at the 2011 mla

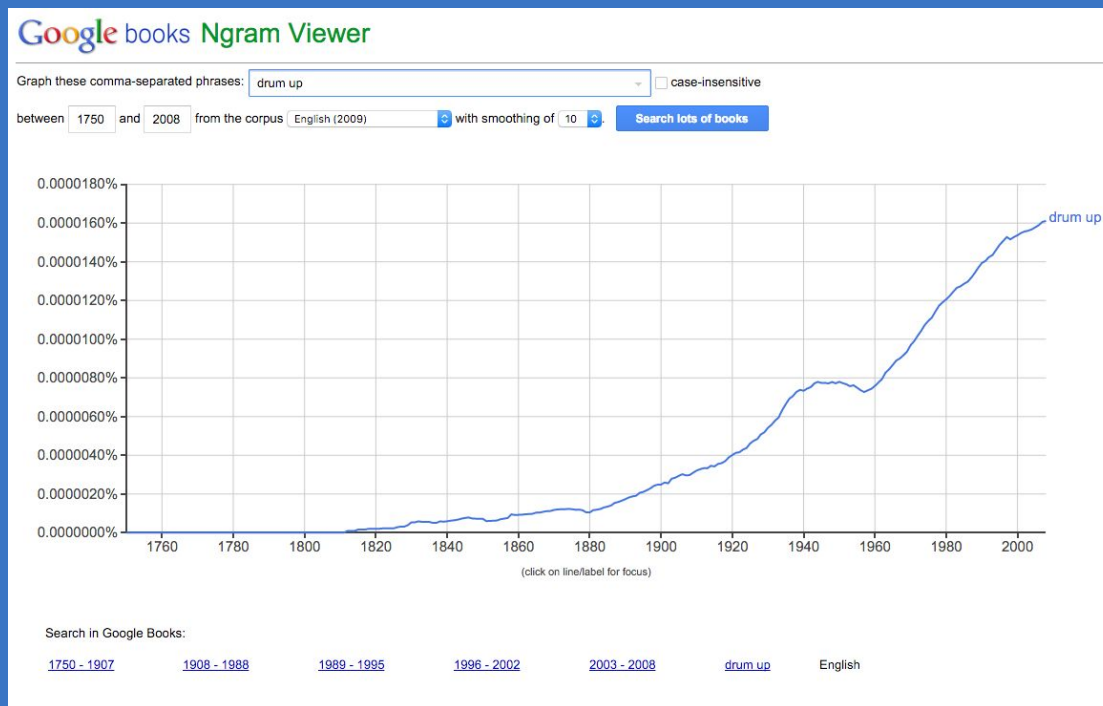


Digital humanities as culturomics





Digital humanities as culturomics

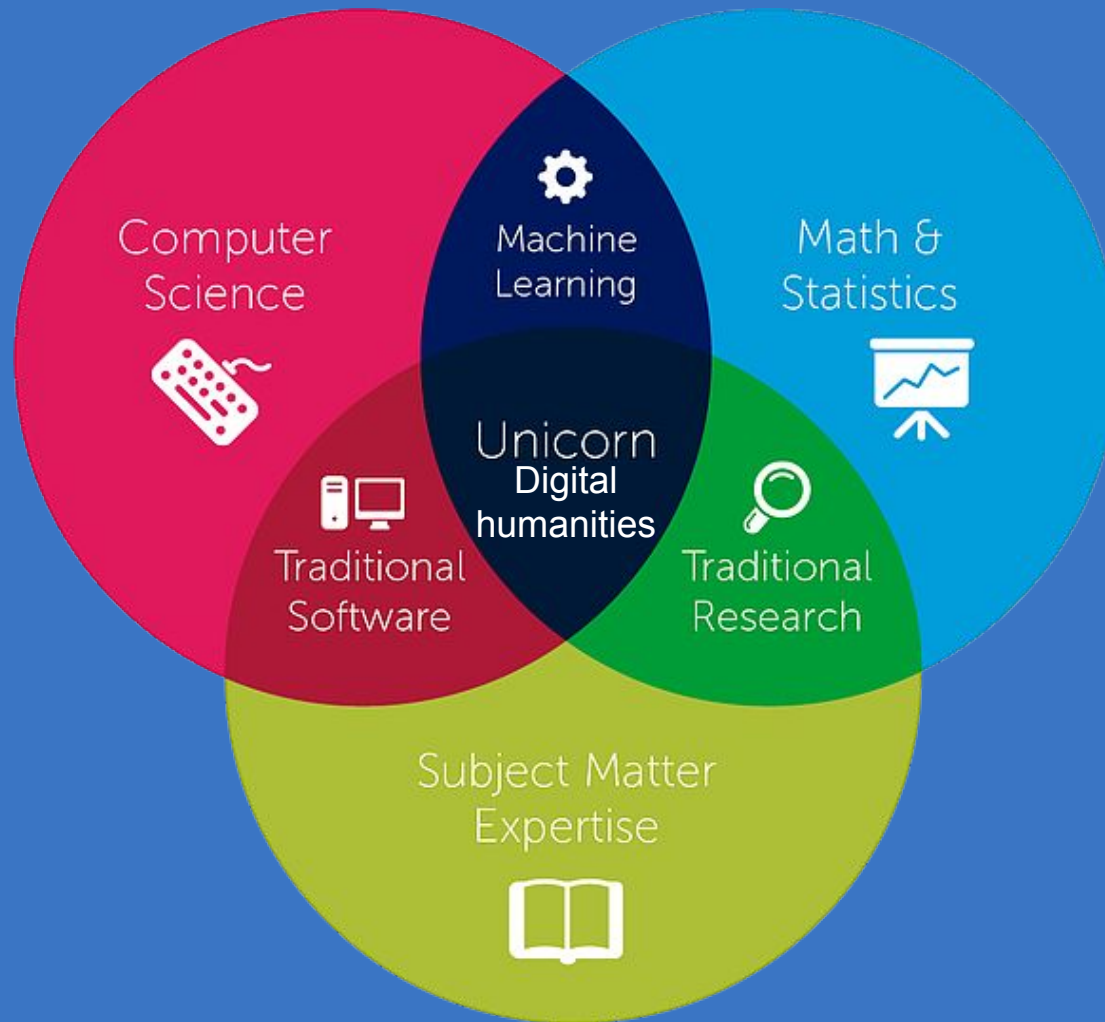




Digital humanities as multidisciplinary collaboration

Our mission is to produce, **through the lens of humanistic inquiry, new modes of thinking in design and computer science** to serve data-driven research in the humanities. We believe that humanistic inquiry, grounded in interpretation, has much to contribute to the development of technologies if they are to help us reveal ambiguity and paradox, allowing human-scale exploration of complex systems.

- About -page of the Humanities + Design research laboratory at Stanford





What to learn if you're a humanist?

1. Knowledge of easy to use end-user data processing and visualization tools
 - Easy to use for their intended purpose, but limited
2. Knowledge of the fundamentals concepts of programming
 - Frees you to process your data more efficiently
 - Allows you to more freely apply visualizations etc based on ready libraries and tutorials on the Internet
3. High-level understanding of what types of things can be accomplished with advanced CS methods
 - To be able to communicate in collaborative projects



Quick example Word vs. plain text

The image shows a file explorer window on the left and a LibreOffice Writer window on the right. The file explorer displays several RTF files: SG151_01_10.rtf, SG151_10_20.rtf, SG151_20_30.rtf, SG151_30_40.rtf, and SG151_60_68.rtf. The LibreOffice Writer window shows the content of SG151_01_10.rtf, which is a plain text transcript of a conversation. The text is displayed with various formatting artifacts, such as underlines and bolding, which are not present in the original plain text. The text in the window is as follows:

```
SG 151_01_10

KAAKKOISSUOMALAISET TYTÖT, kasvokkaiseskustelu

Mia: itse asiassa< (0.2)
~~~~~
minä voin soittaa sinne (.) lahtee aamusta
~~~~~
et jos on iha hirvee ilma et hoitaa lonku
~~~~~
muun sinne, ei mun tarvi taält lahtee
~~~~~
itttee[ni (- -)]
Susa:.....[no ei niil jos tuolt [ni lmittain =
Mia:.....[mm,]
Susa: = jos on ainaki sellanen myrsky niiku< (0.3)
~~~~~
.h ne lupai[li,
Mia:.....[tottakai ne sen tajuaa jos mie
~~~~~
sanon et .hh [(.)] joo et omie lähe taält =
Susa:.....[mm,]
Mia: = nyt yhtää mihinkää et
Susa: siis miks niil ei oo siel tuntiohjaajaa,
~~~~~
onks ne nyt kaikki sit lossai vai,=
Mia: =mm,
Anu : /sen lakiike sie et mee maanantain,
~~~~~
(0.8)
Mia: enko<
~~~~~
(0.8)
Anu : .nffheh
Mia: meil alkaa harjoittelujakso. (.) ja iltavuoro
~~~~~
*sit*, @savit<aipaleella>@,
.nf[f]
Susa:.....[s]avitaipa[leella.
Anu :.....[mihin sinä meet sinne sit aina.
Mia: mie myön< meitä luokkakaverin kaa, (0.3) myö
~~~~~
mennä kahestaa autolla,
```

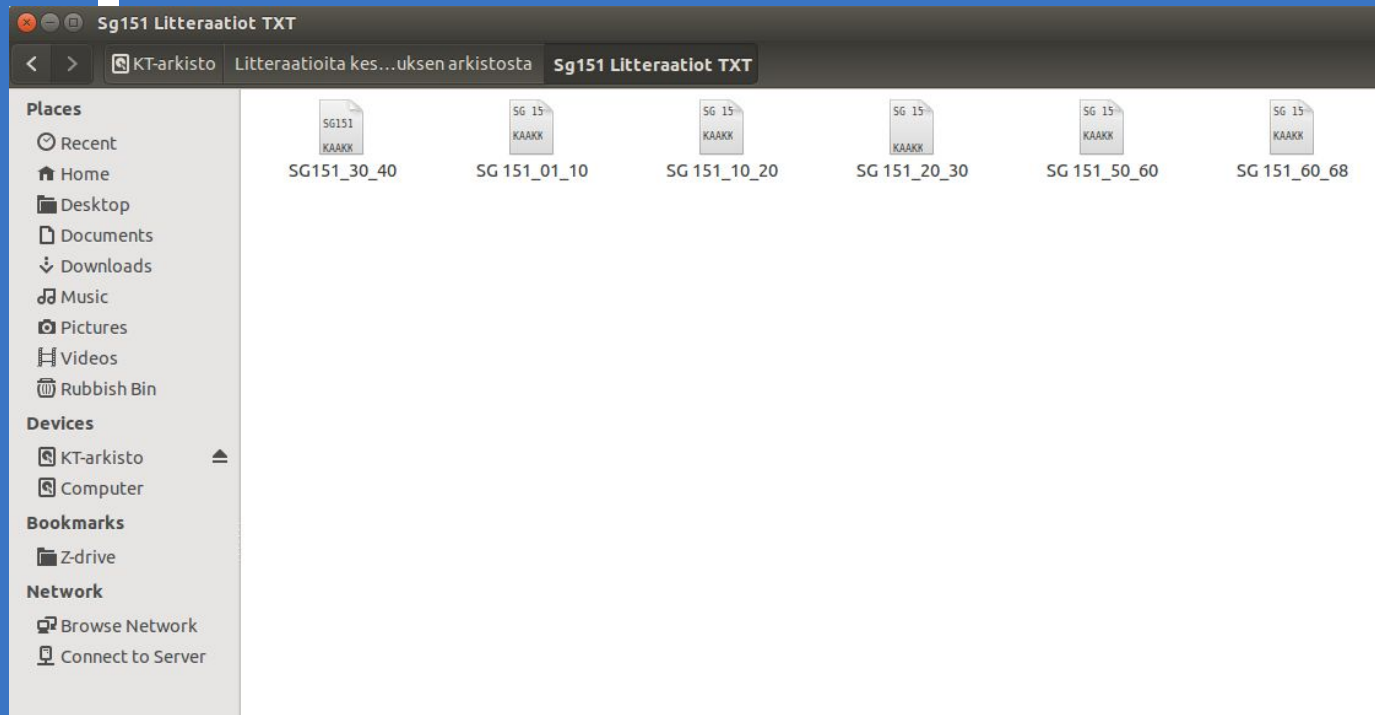


Quick example Word vs. plain text

The image shows a Windows File Explorer window in the background, displaying a folder named 'Sg151 Litteraatiot RTF'. The folder contains several files with names like 'SG151_01_10.rtf', 'SG151_10_20.rtf', 'SG151_20_30.rtf', 'SG151_30_40.rtf', 'SG151_40_50.rtf', and 'SG151_50_60.rtf'. In the foreground, a web browser window is open to the 'Convertio' website. The browser's address bar shows 'https://convertio.co/files/'. The website interface includes a 'Start new!' section with a 'From Computer' button and a 'Download archive (.zip)' button. Below this, a table shows a conversion progress for a file named 'SG142_12_perunkijotusjuttu.rtf', which is marked as 'FINISHED' and 'DOWNLOADED'. The website also displays 'Your Plan: Member' with 'Conversion minutes left: 4' and 'API minutes left: 25'. On the right side, there is a 'My Files' section with 'Your Converted Files' and a list of tools including 'OCR (Text Recognition)', 'Merge PDF', 'Compress PDF', 'Unlock PDF', and 'URL Converter'. At the bottom, it shows 'Available OCR Pages: 50' and buttons for 'START RECOGNITION' and 'BUY PAGES'.



Quick example Word vs. plain text





Quick example Word vs. plain text

Sg151 Litteraatiot TXT

KT-arkisto Litteraatioita kes...uksen a

Places

- Recent
- Home
- Desktop
- Documents
- Downloads
- Music
- Pictures
- Videos
- Rubbish Bin

Devices

- KT-arkisto
- Computer

Bookmarks

- Z-drive

Network

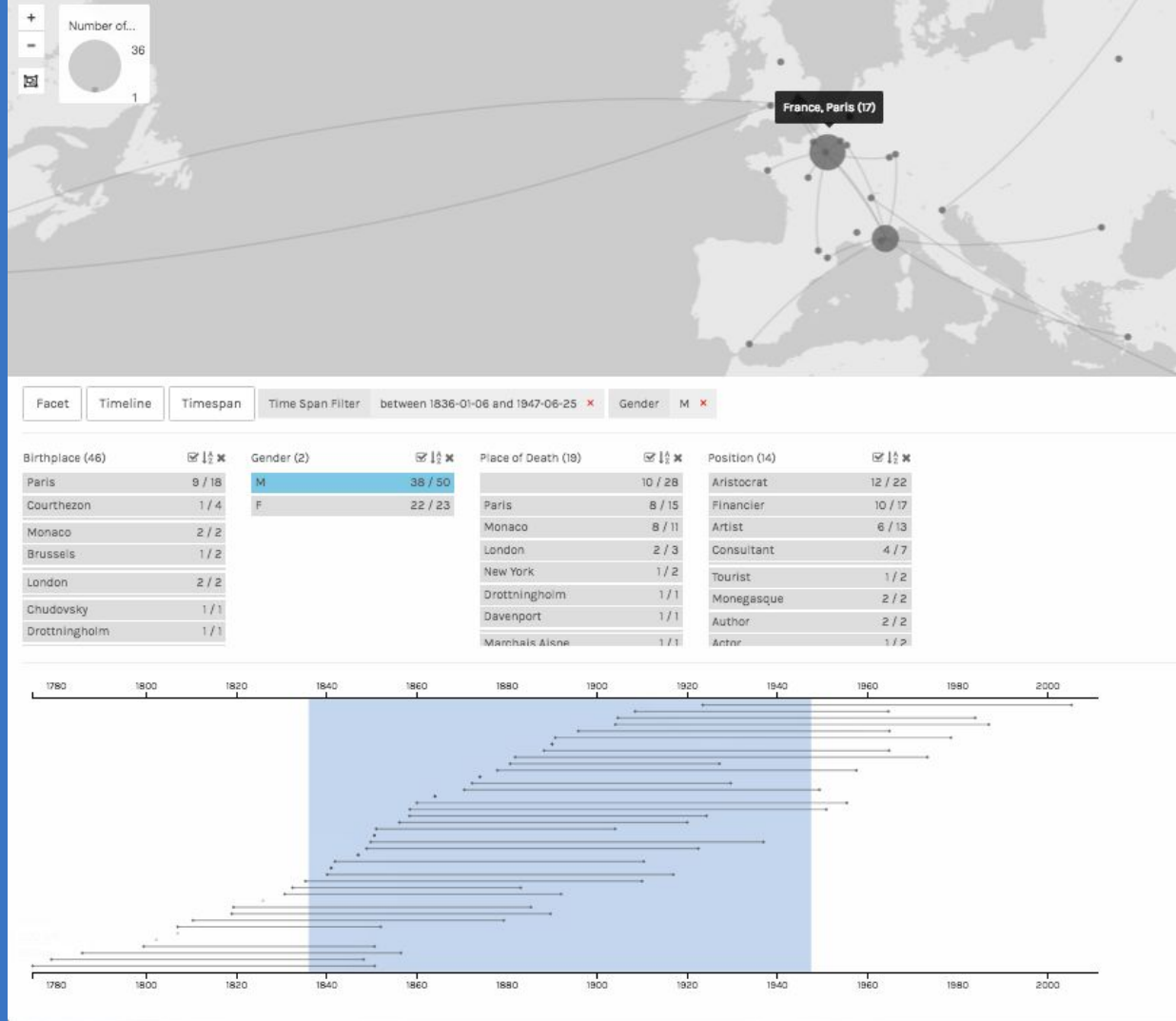
- Browse Network
- Connect to Server

SG151_30_40

```
Terminal
SG 151_20_30:615:Anu: mitä sie [teet,]
SG 151_20_30:630:Susa: [eikä] sietkää oo tullu mitää siis niinku miulle
SG 151_20_30:660: rahat ku et ilman et tekee mitää.
SG 151_20_30:684:Anu: mitä teit oli pääsykokeissa.
SG 151_20_30:722: et no mitäs sie alot teha jos et sie pääse tänne.
SG 151_20_30:801: mikä meil oli sillo Kauppakadul siin olohuoneen pöytänä
SG 151_20_30:813: näytti siel ainaki mitä mie Doorikses sitä näin.
SG 151_20_30:815:Susa: no #no# mikäs siinä(.) tyttöystävä asuu Ranskas et se saa
SG 151_20_30:816: ikin mitää tietää [ku]kkaan Suomes ei osaa puhuu yks viies
SG 151_20_30:822: mitä Pekka tääl on puuhallu.@
SG 151_20_30:916:Miia: [hei] miten sen maanantain
SG151_30_40:47:h : lappuja mit- mil merkitään ne tekopaikat,=
SG151_30_40:66:ä : mite se niin paljo maksaa.
SG151_30_40:75: oli sen laskenu ja et mitä Marian pitäs
SG151_30_40:181:h : eihä se oo mitää kato ku .h eihä se oo (.) tämmöne
SG151_30_40:182: periaattees nii ku (.) mikää (.) juottola siis
SG151_30_40:368:ä : no en mie kyl *sitä nää tääl missä*
SG151_30_40:381:A : [pimee]llä mie en >ni ku nää näillä< mitää
SG151_30_40:390:h : nii joo [mie halusin sellaset] (.) kans just mis
SG151_30_40:411:h : [joo miun mi- se ei vissii ees oo mikää
SG151_30_40:412:h : opt]ikko eikä mikää miust tuntuu et se on vissii
SG151_30_40:435:A : >ni [sit] ne< sanoki sit et hyö ei tiää et mikä
SG151_30_40:472:h : tuliks noihin nyt mitää muuta muutosta siis nii ku
SG151_30_40:474:h : korjaamaa lisää tai mitää,
SG151_30_40:489:? : ((haukottelee ja sanoo samalla jotain, mitä?))
SG151_30_40:525:ä : tavallaa se liimakohta ei o sielt mitenkä lähteny
SG151_30_40:533:ä : niit mitää <lait*[aa*],
SG151_30_40:550:A : iha täyn niit liimoi mitä< (.) lähempänä ne on ne
SG151_30_40:566:A : >ja mitä kato enemmän nec kasvaa tuolt päänahast
SG 151_50_60:41:Anne: Se oli joku semmonen punanen, siin oli mitähän siin oli #jotain#, (0.5) nor- >niin< siinä oli norsuja.
SG 151_50_60:77:Susa: .hh ääni mitä haluaa Ekuullaat. .hh
SG 151_50_60:167:Anne: Että tota jos, (.) #et# (.) mikä minust on hölmöä ettei se sano, (*siis [niinku]),
SG 151_50_60:171:Anne: se et miksel sano< (.) et jos sille tults joku kohtaus ja nä.
SG 151_50_60:180:Anne: niinku nää lääkintämiehet #ta nää mitkä nää nyt on,#
SG 151_50_60:187:Anne: Et jos ne ky[syy et onks< et mikä tän naisen tilla onks se raskaana vai,]
SG 151_50_60:245:Anne: [Nii siit tulee just semmonen] olo et mitähän tuo kattoo [mun] mahaa koko .ajan (. *että*)
SG 151_50_60:311:Susa: Ja nehä on asunu ne Lähteenarot sillo- (0.2) siinä mis me ollaan asuttu. .hhhh (0.4) ö: sillon ku me oon ollu pieni. Tos- (0.2) meä- (.)
SG 151_50_60:363:Susa: metä äitiki tunt- (.) tuns niinku ne (.) Lähteenarot.h
SG 151_50_60:383:Susa: Siis semmost mahaa mikä ei todellakaan siihen sen Emummu- .hhh (.) ropp(h)aan n(h)iink(h)u m(h)itenkään sopinu et, *mie (-) aattelin et :
os se oottaa vaik tolst vauvaa.*
SG 151_50_60:418:Susa: Meinaat sie mennä joulun töihin *oot sie kyselly mistään*.
SG 151_60_68:39:Susa: Meinaat sie mennä joulun töihin *oot sie kyselly mistään*.
SG 151_60_68:88:Miia: Semmosti mitä on ollu pakko kasata joululom[a]ks].
kanner@lx5-sugl2:/media/kanner/KT-arkisto/Litteraatioita keskusteluntutkimuksen arkistosta/Sg151 Litteraatiot TXT$
```



Quick example: End-user tools - Letters in Palladio





Quick example: programming

Jupyter Welcome to Python (unsaved changes) Python 3

```
In [1]: %matplotlib notebook

import pandas as pd
import numpy as np
import matplotlib

from matplotlib import pyplot as plt
import seaborn as sns

ts = pd.Series(np.random.randn(1000), index=pd.date_range('1/1/2000', periods=1000))
ts = ts.cumsum()

df = pd.DataFrame(np.random.randn(1000, 4), index=ts.index,
                  columns=['A', 'B', 'C', 'D'])
df = df.cumsum()
df.plot(); plt.legend(loc='best')
```

Figure 1

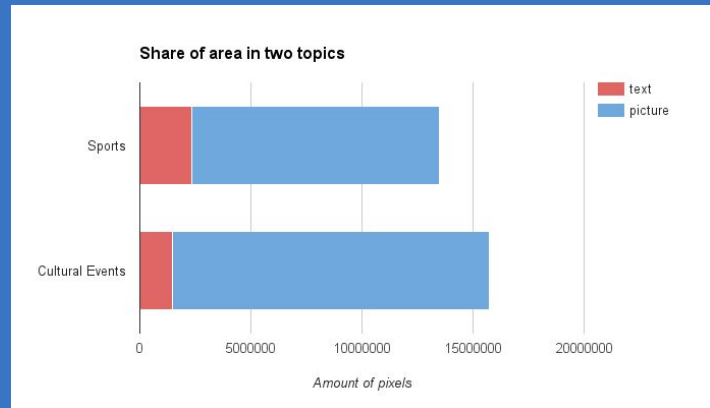
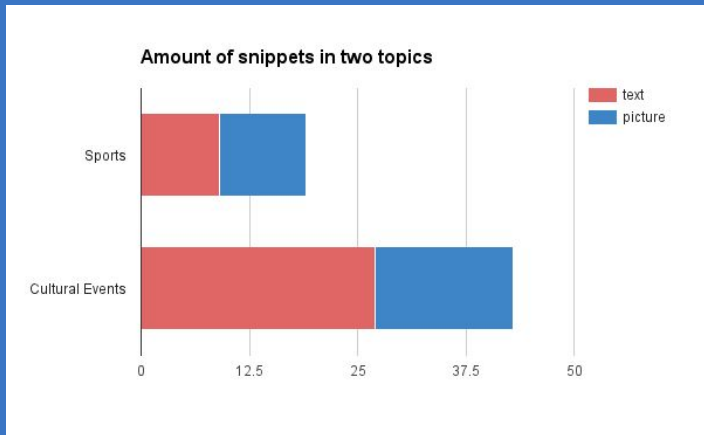
The plot displays four time series (A, B, C, D) as lines. Series C (red) shows a strong upward trend, reaching approximately 35 by the end of the period. Series A (blue) and B (green) show more volatile, fluctuating behavior, with A ending near 0 and B near -30. Series D (purple) also fluctuates, ending near 0. The x-axis is labeled with 'Jan 2000', 'Jul', 'Jan 2001', 'Jul', 'Jan 2002', and 'Jul'. The y-axis ranges from -40 to 40.

```
Out[1]: <matplotlib.legend.Legend at 0x7ff52c9984a8>
```

Feel free to open new cells using the plus button (+), or hitting shift-enter while this cell is selected.

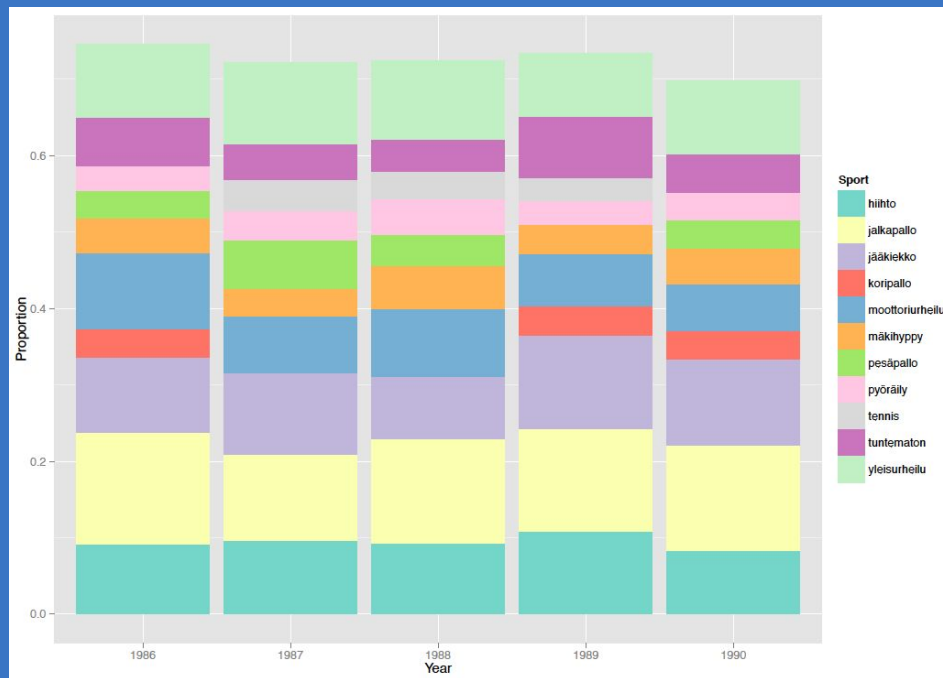


Layout choices by topic in in-flight magazines



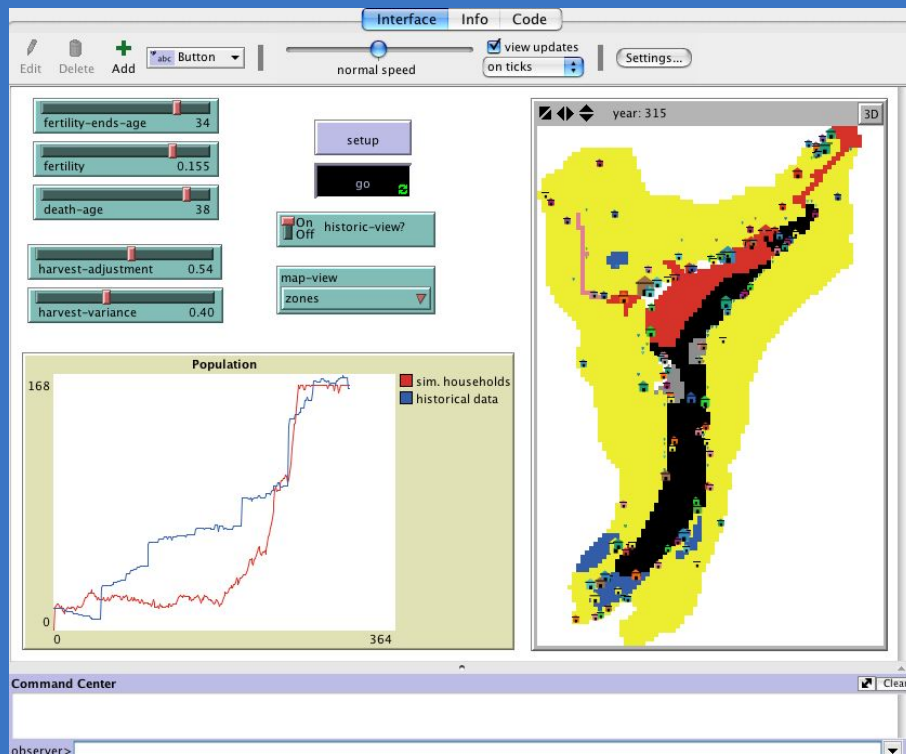


Proportion of sports coverage in Urheiluruutu by number of minutes





Simulating the habitation of the Anasazi Valley



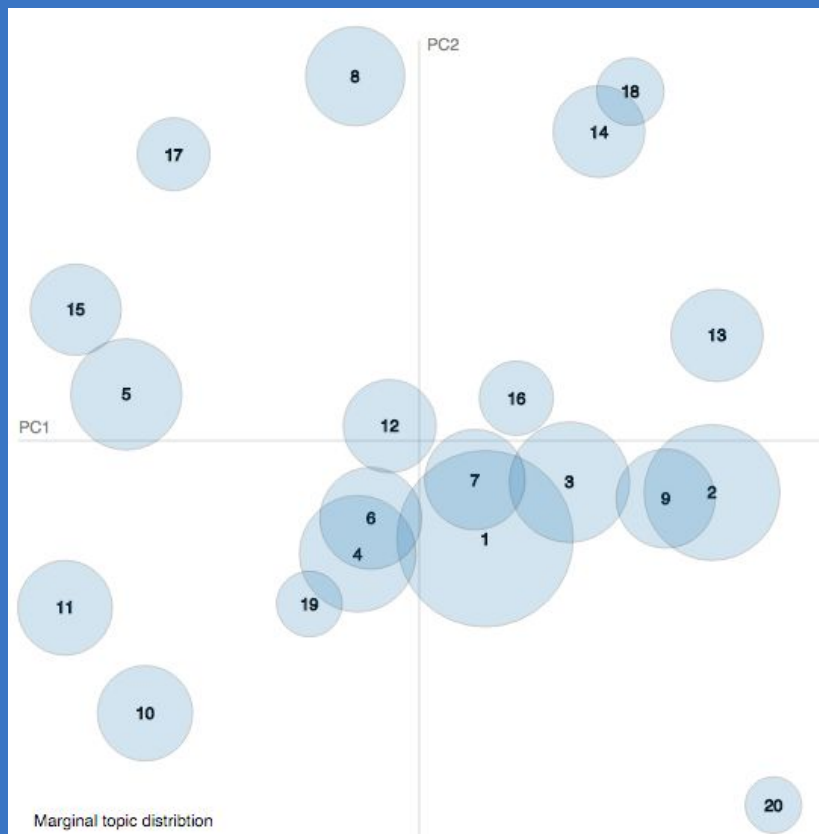


Quick example

Co-citation graph of mythical and real authorities in ancient Greek scientific texts



Quick example: Data analysis - topic modeling + dimensionality reduction for letters



can not ✕ can't cannot +

Constrain

Search

[kɔ]jan' noʔ!ʔ?

can not	52/612
came nott	2
can nott	2/27
can not	2/7
came not	2/9
can note	0/1
can nowt	0/1
cane nott	0/1
cann not	0/1
can notte	0/1
canst not	0/4
cane not	0/9

Education

Higher	3/564
Higher (Foreign)	0/43
Higher (Inns of Court)	1/152
Higher (Oxford)	1/216
Higher (Cambridge)	2/226
Apprenticed	0/64
Secondary	0/30
Private/Self: Classical	0/48
Elementary	0/6

Filter

Context

wurshypfull. Y hafe seynd no word, for I can not medle yn high maters that passyth my wy
y maister ne my lady had neuere, and he can not know it. &c. Also my maister hat
ill thys be doon. <P I, 117> I can not ell, but ye wille not foryete thys that
d by the resseyuour and by the bayliffs can not approve they iberatz just till the s
ued the laste yere/ and this yere to/ I can not understand hit/ y remytte hit to youre
I yow thynk vppon all othyr maters that I can not wryte esylwe now. And the Blessed Tr
of towchyng the false forgyd eydens, I can not spek wyth hym yet; hys wyfe seyth allwe
d +te masangere. I trow, be so wysse he can not do yt. +Ge mwst pay him fore hys labou
at will be to lytill. And I wot well we can not get xl d. of Cristofyre Hanswim, so I xa
myn owne lffkoffe. and trull. coswn. I ca odere that well. And therefore. coswn.

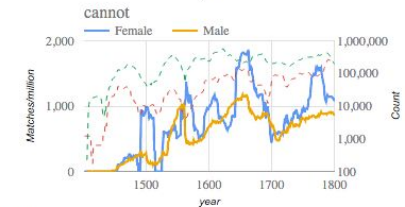
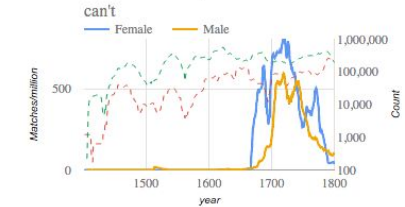
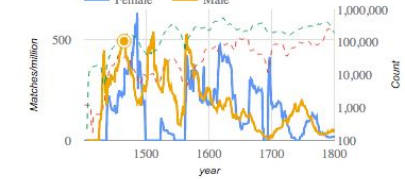
CLEMENT PASTON to JOHN I PASTON on 25 August, 1461

<Q A 1461 FN CPASTON> <X CLEMENT PASTON> <P I, 199> [] [M16. TO JOHN PASTON I 1461, 25 AUGUST] [] (^To hys rythe reuerent and worchyfpwll broder John Paston. ^) Rythe reuerent and worchyfpwll broder, I recomawnde me to +gowre good brotherhood, desyeryng to herre of +goure welfare and good prosperite', the quwyche I pray God encesse to his pleswre and +gowre hertys hesse; certyfyng +gow +tat I haue spok wyth John Rysswe, and Playter spak wyth him bothe, on Fryday be-fore Seynt ...ce sum were, +tat +tan +ge wold haue hym hom, +te quwyche xwld cause hym not to be hadde in fauore; and also men wold thynke +tat he were put owte of seruice. Also W. Pekok tellythe me +tat hys mony is spent, and not ryotesly but wysly and discretly, fore +te costys is gretter in +te Kyngys howse qwen he nydthe +tan +ge wend it hadde be, as Wyllam Pekok can tell +gow. And +tere wee mwst gett hym i c s. at +te lest, as by Wyllam Pekokys seyng, and +get +tat will be to lytill. And I wot well we can not get xl d. of Cristofyre Hanswim, so I xall be fayn to lend it him of myn owne siluer. If I knew verly +gour entent were -tat he xwld cum hom I wold send hym non. There I wyl doo as me thynkthe +ge xwld be best plesyd, and -tat, me thynkythe, is to send him +te siluer. +Tere-fore I pray +gow as hastely as +ge may send me a--gen v mark, and +te remanwnt I trow I xall gett vp-on Cristofyre Hanswim and Lwket. I pray +gow send me it as hastely as +ge may, fore I xall leue my-selwe rythe bare; and I pray +gow send me a letter how +ge woll -tat he xall be demenyd. Wrytyn on Twsday after Seynt Barthelme, &c. (Christus vos obseruet.) By Cle[ment Paston]

It plasyt ther as it shold be, but they can not fynd no thyng of it. Also that ye look
comfort for to cumfort me when I cum. can not cum to youe as sone as I wuld: for I m
dyr he meuyd the Kyng wyth it or nowt can not seyn. Myn oncyll Wylliam thynkys naye,
be bound for to John Maryot. Item, can not redly tell yow what ye be endettyd for
efull recomawnde me vnto you as he that can not be meny nor nought schalbe tyll it be o
n for syllyur; but mony can I non get. can not yet make my pesse wyth my lord of Norff
yth my modyr for your comyng hom, but can not fynd by hyr -tat she wyll depert wyth e
the most but, as for all hys dettors, can not pay hym tyll I can gadyr more mony, so
hurt by Parker. As for myn oncyll W. I can not mak hym to send yow the byll of syche s
maters set clar. What -tat he menyth can not sey. As for all othyr maters in thys
one be takyn; what shall falle of ham can not sey. The qwen -tat was and the Duchesse
ing in his wrytyng that for asmych as he can not be payd of his tentawtes as he gat be b
hys myche on +gour owyn hed, and yf +ge can not spede of +te hattase I pray +gow bye me
wyst in Ingelonde, for by my trowthe I can not her by <P I, 441> pylgrymes +tat

View

can not Partition: gender



Partition: gender

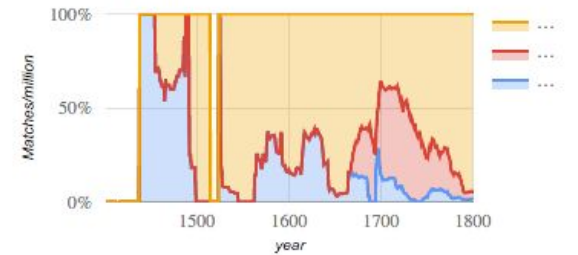
Sample length (years): 20

Graph type: Individual compare as area compare as scatterplot

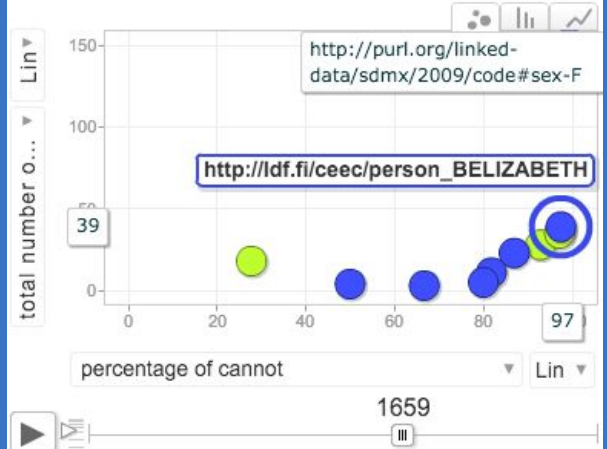
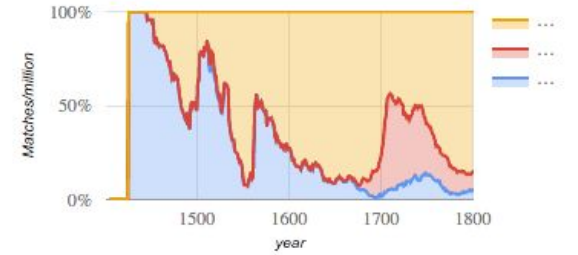
Hide totals Show as accumulation chart Partitions as charts

Calculate values as: total text average author average

Female



Male



roller (3)					RLR (3)	RLR (3)
roller	rolers	yes		2	RLR	RLR
roller	roller	yes		3	RLR	RLR
roller	rollers	yes		6	RLR	RLR
ruler	ruler	unclear	er1; 1 in ed	5	RLR	RLR
rem-ber	rem-ber	no		2	RMBR	RMBR
					RMLR (2)	
					RMLR (2)	RMLR (2)
rambler (2)					RMLR (2)	RMLR (2)
rambler	rambler	unclear	some NP0	7	RMLR	RMLR
rambler	ramblers	no	NP0 (perioc	1	RMLR	RMLR
remem[{}er	remem[{}ei	no		1	RMMB	RMMBR
					RMMR (8)	
					RMMR (7)	RMMR (7)
rememb=r=s	rememb=r=ε	no		1	RMMR	RMMR
remember (2)					RMMR (2)	RMMR (2)
remember	rememb=r=	no		8	RMMR	RMMR
remember	remember	no		690	RMMR	RMMR
remember's	remember's	no		2	RMMR	RMMR
remembers	remembers	no		22	RMMR	RMMR
remembr	remembr	no		2	RMMR	RMMR
remmember	remmember	no		2	RMMR	RMMR
remembrancer	remembranc	yes	er1	1	RMMR	RMMRNSR
					RMNT (9)	
					RMNT (9)	RMNTR (9)
remainder (9)					RMNT (9)	RMNTR (9)
remainder	remainder	no	MO	1	RMNT	RMNTR

of small diameter which the seed is to be subjected to before it is exposed to the pressure of the great stone

odel he has brought with him from England there is an apparatus for bruising the seed by making it pass between two iron

this he says is a late invention; but as it requires more workmanship than is easy to be had here I think cast iron rol

of small diameter which the seed is to be subjected to before it is exposed to the pressure of the great stone

<Q A 1783 FN SBENTHAM> <X SAMUEL BENTHAM> <P III,209> [] [469 FROM SAMUEL BENTHAM\] [^TO JEREMY BENTHAM^] [ADDRESSED:] Jere=y=Bentham Esq=r= / Lincoln's Inn / London Petersburg Sept. 13th O.S. 1783. I am at length taken into the service of this country. The rank given me is that of (Conseiller de la Cour) , which is only equal to that of Lieutenant Colonel in the army. Considering that I had had no Military rank in any other country to found my pretensions on, ...^) to bruise the seed in oil mills, and what objections he sees to such a substitute. In many places I imagine the rollers of stone may be cheaper; but that would not be the case here. Capper is returned and his having seen you all has attached me to him. It is probable we may be concerned together in the erection of an oil mill which gave rise to the above question. In a model he has brought with him from England there is an apparatus for bruising the seed by making it pass between two iron rollers of small diameter which the seed is to be subjected to before it is exposed to the pressure of the great stone

OED

Oxford English Dictionary

The definitive record of the English language

GO

Lost for Words? | Advanced search | Help
Browse:
▶ Dictionary
▶ Categories
▶ Timelines

Help on Search Results | Print | Email

Quick search results

Showing 1-5 of 5 results in 5 entries

Widen search? Find 'roller' in: [▶ phrases \(186\)](#) [▶ definitions \(290\)](#) [▶ etymologies \(49\)](#) [▶ quotations \(1600\)](#) [▶ full text \(751\)](#)

View as: [List](#) | [Timeline](#) Sort by: [Entry](#) | [Frequency](#) | [Date](#)

1. roller, n.¹ [View full entry](#) ●●●●● 1295

...One of a number of (usually large) cylinders of wood or other hard material, sometimes attached to a framework, over which a heavy object can be passed....

2. roller, n.² [View full entry](#) ●●●●● 1678

...A jay-like bird, *Coracias garrulus* (family Coraciidae), having mainly greenish-blue plumage with dark blue wings and a chestnut back, noted for its characteristic tumbling display flight and found...

Your current search (entries):

roller

Save
 Refine search

Refine your search

- ▶ Subject
- ▶ Language of Origin
- ▶ Region
- ▶ Usage
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My entries (2)

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- Entry ▼
- subduement, n.
- subduer, n.
- subduing, n.
- subduing, adj.
- subduple, adj.
- subduplicate, adj.
- subdural, adj.
- subdwarf, n.
- sub-echo, n.
- subedar, n.
- subedar, n.
- sub-edit, v.
- sub-editor, n.
- sub-editorial, adj.



Don't get carried away by fancy methods!

1. Your dataset must be applicable to the methods you choose. Complex methods often make presuppositions about the data they apply to - if you don't understand these deeply, you'll end up with invalid results
2. In typical DH research, 90% of your time will go to gathering and understanding the data and transforming it into a form you can use - using complex methods, another 90% of your time may go to altering them to fit your data, and it'll run out
3. Complex methods are often unnecessary for DH work. On the contrary, often simpler methods are actually better.



Course outline

- @ Moodle



First assignment

- Look over the final projects from last year as well as the datasets listed. Select the project as well as the dataset that interest you the most
- Post a short message on the #meth4dh channel on the course Slack before on *why* you chose those two



Practicalities

- Moodle
- Slack



Questionnaire

- Flinga - why are you here, what do you want?
- Questionnaire



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