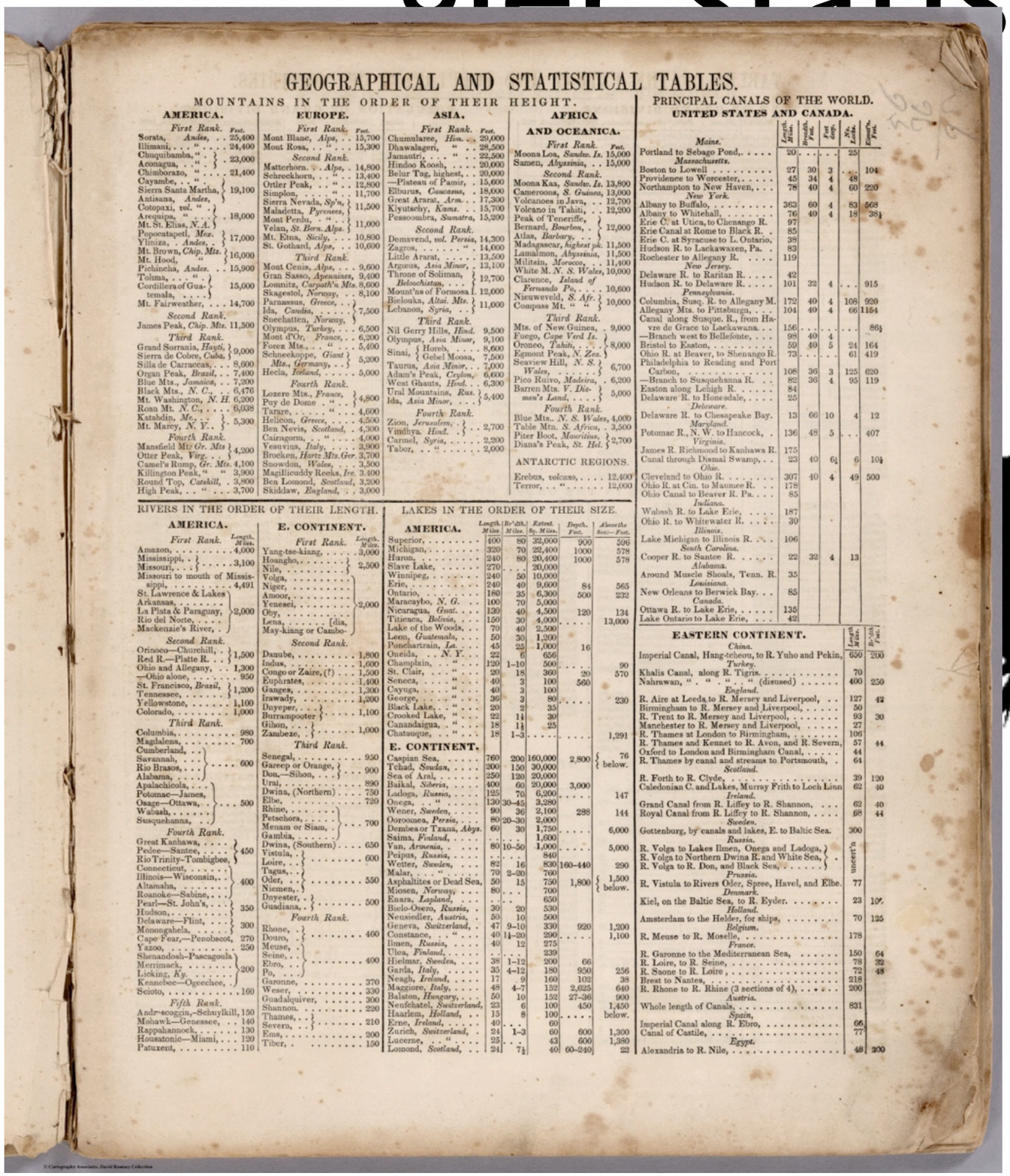
Motivasjon
TMA4240 Statistikk

Ingelin Steinsland

NTNU, hausten 2015

Kva er statistikk / Kva gjer statistikarar?



GEOGRAPHICAL AND STATISTICAL TABLES.

MOUNTAINS IN THE ORDER OF THEIR HEIGHT.

AMERICA.

	Feet.
First Rank.	
Sorata, *Andes*,	25,400
Illimani, "	24,400
Chuquibamba, "	23,000
Aconagua, "	21,400
Chimborazo, "	
Cayambe, "	
Sierra Santa Martha, Antisana, *Andes*,	19,100
Cotopaxi, *vol.* "	
Arequipa, "	18,000
Mt. St. Elias, *N. A.*	
Popocatapetl, *Mex.*	17,000
Ylinitza, *Andes*,	
Mt. Brown, *Chip. Mts.*	16,000
Mt. Hood, "	
Pichincha, *Andes*,	15,900
Tolima, "	
Cordillera of Guatemala,	15,000
Mt. Fairweather,	14,700
Second Rank.	
James Peak, *Chip. Mts.*	11,500
Third Rank.	
Grand Sorrania, *Hayti*,	9,000
Sierra de Cobre, *Cuba*,	
Silla de Carraccas,	8,600
Organ Peak, *Brazil*,	7,400
Blue Mts., *Jamaica*,	7,200
Black Mts., *N. C.*,	6,476
Mt. Washington, *N. H.*	6,200
Rosa Mt. *N. C.*,	6,038
Katahdin, *Me.*,	5,300
Mt. Marcy, *N. Y.*	
Fourth Rank.	
Mansfield Mt. *Gr. Mts*	4,200
Otter Peak, *Virg.*	
Camel's Rump, *Gr. Mts.*	4,100
Killington Peak, " "	3,900
Round Top, *Catskill*,	3,800
High Peak, "	3,700

EUROPE.

	Feet.
First Rank.	
Mont Blanc, *Alps*,	15,700
Mont Rosa, "	15,300
Second Rank.	
Matterhorn, " *Alps*,	14,800
Schreckhorn, "	13,400
Ortler Peak, "	12,800
Simplon, "	11,700
Sierra Nevada, *Sp'n*, Maladetta, *Pyrenees*,	11,500
Mont Perdu, "	
Velan, *St. Bern. Alps*,	11,000
Mt. Etna, *Sicily*,	10,800
St. Gothard, *Alps*,	10,600
Third Rank.	
Mont Cenis, *Alps*,	9,600
Gran Sasso, *Apennines*,	9,400
Lomnitz, *Carpath'n Mts.*	8,600
Skagestol, *Norway*,	8,100
Parnassus, *Greece*,	
Ida, *Candia*,	7,500
Snechatten, *Norway*,	
Olympus, *Turkey*,	6,500
Mont d'Or, *France*,	6,200
Forez Mts., "	5,400
Schneekoppe, *Giant Mts., Germany*,	5,200
Hecla, *Iceland*,	5,000
Fourth Rank.	
Lozere Mts., *France*, Puy de Dome "	4,800
Tarare, "	4,600
Helicon, *Greece*,	4,500
Ben Nevis, *Scotland*,	4,300
Cairngorm, "	4,000
Vesuvius, *Italy*,	3,900
Brocken, *Hartz Mts.Ger.*	3,700
Snowdon, *Wales*,	3,500
Magillicuddy Reeks, *Ire.*	3,400
Ben Lomond, *Scotland*,	3,200
Skiddaw, *England*,	3,000

ASIA.

	Feet.
First Rank.	
Chumularee, *Himalaya*,	29,000
Dhawalageri, "	28,500
Jamautri, "	22,500
Hindoo Koosh,	20,000
Belur Tag, highest,	20,000
—Plateau of Pamir,	15,600
Elburus, *Caucasus*,	18,000
Great Ararat, *Arm.*	17,300
Kiyutschy, *Kamt.*	15,700
Pessoombra, *Sumatra*,	15,200
Second Rank.	
Demavend, *vol. Persia*,	14,300
Zagros, "	14,000
Little Ararat,	13,500
Argæus, *Asia Minor*,	13,100
Throne of Soliman, *Beloochistan*,	12,700
Mount'ns of Formosa I.	12,000
Bielouka, *Altai. Mts.*	11,000
Lebanon, *Syria*,	
Third Rank.	
Nil Gerry Hills, *Hind.*	9,500
Olympus, *Asia Minor*,	9,100
Sinai, Horeb, Gebel Moosa,	7,500
Taurus, *Asia Minor*,	7,000
Adam's Peak, *Ceylon*,	6,600
West Ghauts, *Hind.*	6,300
Ural Mountains, *Rus.* Ida, *Asia Minor*,	5,400
Fourth Rank.	
Zion, *Jerusalem*,	
Vindhya, *Hind.*	2,700
Carmel, *Syria*,	2,200
Tabor, "	2,000

AFRICA AND OCEANICA.

	Feet.
First Rank.	
Moona Loa, *Sandw. Is.*	15,000
Samen, *Abyssinia*,	15,000
Second Rank.	
Moona Kaa, *Sandw. Is.*	13,800
Cameroons, *S. Guinea*,	13,000
Volcanoes in Java,	12,700
Volcano in Tahiti,	12,200
Peak of Teneriffe,	12,000
Bernard, *Bourbon*,	
Atlas, *Barbary*,	
Madagascar, *highest pk.*	11,500
Lamalmon, *Abyssinia*,	11,500
Militsin, *Morocco*,	11,400
White M. *N. S. Wales*,	10,000
Clarence, *Island of Fernando Po*,	10,600
Nieuweveld, *S. Afr.*	10,000
Compass Mt. "	
Third Rank.	
Mts. of New Guinea,	9,000
Fuego, *Cape Verd Is.*	
Oroneo, *Tahiti*,	8,000
Egmont Peak, *N. Zea.*	
Seaview Hill, *N. S. Wales*,	6,700
Pico Ruivo, *Madeira*,	6,200
Barren Mts. *V. Diemen's Land*,	5,000
Fourth Rank.	
Blue Mts., *N. S. Wales*,	4,000
Table Mtn. *S. Africa*,	3,500
Piter Boot, *Mauritius*,	2,700
Diana's Peak, *St. Hel.*	

ANTARCTIC REGIONS.

	Feet.
Erebus, *volcano*,	12,400
Terror, "	12,000

PRINCIPAL CANALS OF THE WORLD.

UNITED STATES AND CANADA.

	Length. Miles.	Breadth. Feet.	Feet deep.	No. Locks.	Depth. Feet.
Maine.					
Portland to Sebago Pond,	20			25	
Massachusetts.					
Boston to Lowell	27	30	3		104
Providence to Worcester,	45	34	4	48	
Northampton to New Haven,	78	40	4	60	220
New York.					
Albany to Buffalo,	363	60	4	83	568
Albany to Whitehall,	76	40	4	18	38½
Erie C. at Utica, to Chenango R.	97				
Erie Canal at Rome to Black R.	85				
Erie C. at Syracuse to L. Ontario,	38				
Hudson R. to Lackawaxen, Pa.	83				
Rochester to Allegany R.	119				
New Jersey.					
Delaware R. to Raritan R.	42				
Hudson R. to Delaware R.	101	32	4		915
Pennsylvania.					
Columbia, Susq. R. to Allegany M.	172	40	4	108	920
Allegany Mts. to Pittsburgh,	104	40	4	66	1154
Canal along Susque. R., from Havre de Grace to Lackawana.	156				86½
—Branch west to Bellefonte,	98	40	4		
Bristol to Easton,	59	40	5	24	164
Ohio R. at Beaver, to Shenango R.	73			61	419
Philadelphia to Reading and Port Carbon,	108	36	3	125	620
—Branch to Susquehanna R.	82	36	4	95	119
Easton along Lehigh R.	84				
Delaware R. to Honesdale,	23				
Delaware.					
Delaware R. to Chesapeake Bay.	13	66	10	4	12
Maryland.					
Potomac R., N. W. to Hancock,	136	48	5		407
Virginia.					
James R. Richmond to Kanhawa R.	175				
Canal through Dismal Swamp,	23	40	6½	6	10½
Ohio.					
Cleveland to Ohio R.	307	40	4	49	500
Ohio R. at Cin. to Maumee R.	178				
Ohio Canal to Beaver R. Pa.	85				
Indiana.					
Wabash R. to Lake Erie,	187				
Ohio R. to Whitewater R.	30				
Illinois.					
Lake Michigan to Illinois R.	106				
South Carolina.					
Cooper R. to Santee R.	22	32	4	13	
Alabama.					
Around Muscle Shoals, Tenn. R.	35				
Louisiana.					
New Orleans to Berwick Bay.	85				
Canada.					
Ottawa R. to Lake Erie,	135				
Lake Ontario to Lake Erie,	42				

RIVERS IN THE ORDER OF THEIR LENGTH.

AMERICA.

	Length. Miles.
First Rank.	
Amazon,	4,000
Mississippi,	3,100
Missouri,	
Missouri to mouth of Mississippi,	4,491
St. Lawrence & Lakes	2,000
Arkansas,	
La Plata & Paraguay,	
Rio del Norte,	
Mackenzie's River,	
Second Rank.	
Orinoco—Churchill,	1,500
Red R.—Platte R.	
Ohio and Allegany,	1,300
—Ohio alone,	950
St. Francisco, *Brazil*,	1,200
Tennessee,	
Yellowstone,	1,100
Colorado,	1,000
Third Rank.	
Columbia,	980
Magdalena,	700
Cumberland,	
Savannah,	600
Rio Brasos,	
Alabama,	
Apalachicola,	
Potomac—James,	
Osage—Ottawa,	500
Wabash,	
Susquehanna,	
Fourth Rank.	
Great Kanhawa,	
Pedee—Santee,	450
Rio Trinity–Tombigbee,	
Connecticut,	
Illinois—Wisconsin,	400
Altamaha,	
Roanoke—Sabine,	
Pearl—St. John's,	350
Hudson,	
Delaware—Flint,	300
Monongahela,	
Cape Fear,—Penobscot,	270
Yazoo,	250
Shenandoah–Pascagoula	
Merrimack,	200
Licking, *Ky.*	
Kennebec—Ogeechee,	
Scioto,	160
Fifth Rank.	
Andr-scoggin,–Schuylkill,	150
Mohawk—Genessee,	140
Rappahannock,	130
Housatonic—Miami,	120
Patuxent,	110

E. CONTINENT.

	Length. Miles.
First Rank.	
Yang-tse-kiang,	3,000
Hoanghо,	2,500
Volga,	
Niger,	
Amoor,	
Yenasei,	2,000
Oby,	
Lena, [dia,	
May-kiang or Cambo-	
Second Rank.	
Danube,	1,800
Indus,	1,600
Congo or Zaire, (?)	1,500
Euphrates,	1,400
Ganges,	1,300
Irawady,	1,200
Dnyeper,	
Burrampooter	1,100
Gihon,	
Zambeze,	1,000
Third Rank.	
Senegal,	950
Gareep or Orange,	900
Don,—Sihon,	
Ural,	890
Dwina, (Northern)	750
Elbe,	720
Rhine,	
Petschora,	700
Menam or Siam,	
Gambia,	
Dwina, (Southern)	650
Vistula,	600
Loire,	
Tagus,	
Oder,	550
Niemen,	
Duyester,	500
Guadiana,	
Fourth Rank.	
Rhone,	
Douro,	460
Meuse,	
Seine,	400
Ebro,	
Po,	
Garonne,	370
Weser,	330
Guadalquiver,	300
Shannon,	220
Thames,	
Severn,	210
Ems,	200
Tiber,	150

LAKES IN THE ORDER OF THEIR SIZE.

AMERICA.	Length. Miles.	Breadth. Miles.	Extent. Sq. Miles.	Depth. Feet.	Above the Sea.—Feet.
Superior,	400	80	32,000	900	596
Michigan,	320	70	22,400	1000	578
Huron,	240	80	20,400	1000	578
Slave Lake,	270		20,000		
Winnipeg,	240	50	10,000		
Erie,	240	40	9,600	84	565
Ontario,	180	35	6,300	500	232
Maracaybo, *N. G.*	100	70	5,000		
Nicaragua, *Guat.*	130	40	4,500	120	134
Titicaca, *Bolivia*,	150	30	4,000		13,000
Lake of the Woods,	70	40	2,500		
Leon, *Guatemala*,	50	30	1,200		
Ponchartrain, *La.*	45	25	1,000	16	
Oneida, *N. Y.*	22	6	656		
Champlain, "	120	1–10	500		90
St. Clair, "	20	18	360	20	570
Seneca, "	40	3	100	560	
Cayuga, "	40	3	100		
George, "	36	3	80		230
Black Lake, "	20	2	35		
Crooked Lake, "	22	1½	30		
Canandaigua, "	18	1½	25		
Chatauque, "	18	1–3			1,291
E. CONTINENT.					
Caspian Sea,	760	200	160,000	2,800	76
Tchad, *Soudan*,	200	150	30,000		below.
Sea of Aral,	250	120	20,000		
Baikal, *Siberia*,	400	60	20,000	3,000	
Ladoga, *Russia*,	125	70	6,200		147
Onega, "	130	30–45	3,280		
Wener, *Sweden*,	90	36	2,100	288	144
Ooroomea, *Persia*,	80	20–30	2,000		
Dembea or Tzana, *Abys.*	60	30	1,750		6,000
Saima, *Finland*,			1,600		
Van, *Armenia*,	80	10–50	1,000		5,000
Peipus, *Russia*,			840		
Wetter, *Sweden*,	82	16	830	160–440	290
Malar, "	70	2–20	760		
Enara, *Lapland*,			650		
Bielo-Osero, *Russia*,	30	20	530		
Neusiedler, *Austria*,	50	10	500		
Geneva, *Switzerland*,	47	9–10	330	920	1,200
Constance, "	40	1½–20	290		1,100
Ilmen, *Russia*,	40	12	275		
Ulea, *Finland*,			239		
Hielmar, *Sweden*,	38	1–12	200	66	
Garda, *Italy*,	35	4–12	180	950	256
Neagh, *Ireland*,	17	9	160	102	38
Maggiore, *Italy*,	48	4–7	152	2,625	640
Balaton, *Hungary*,	50	10	152	27–36	900
Neufchatel, *Switzerland*,	23	6	100	450	1,450
Haarlem, *Holland*,	15	8	100		below.
Erne, *Ireland*,	40		60		
Zurich, *Switzerland*,	24	1–3	60	600	1,300
Lucerne, "	25		43	600	1,380
Lomond, *Scotland*,	24	7½	40	60–240	22

EASTERN CONTINENT.

	Length. Miles.	Breadth. Feet.
China.		
Imperial Canal, Hang-tcheou, to R. Yuho and Pekin,	650	200
Turkey.		
Khalis Canal, along R. Tigris.	70	
Nahrawan, " " " " (disused)	400	250
England.		
R. Aire at Leeds to R. Mersey and Liverpool,	127	42
Birmingham to R. Mersey and Liverpool,	50	
R. Trent to R. Mersey and Liverpool,	93	30
Manchester to R. Mersey and Liverpool,	27	
R. Thames at London to Birmingham,	106	
R. Thames and Kennet to R. Avon, and R. Severn,	57	44
Oxford to London and Birmingham Canal,	44	
R. Thames by canal and streams to Portsmouth,	64	
Scotland.		
R. Forth to R. Clyde,	39	120
Caledonian C. and Lakes, Murray Frith to Loch Linn	62	40
Ireland.		
Grand Canal from R. Liffey to R. Shannon,	62	40
Royal Canal from R. Liffey to R. Shannon,	68	44
Sweden.		
Gottenburg, by canals and lakes, E. to Baltic Sea.	300	
Russia.		
R. Volga to Lakes Ilmen, Onega and Ladoga,	uncert'n	
R. Volga to Northern Dwina R. and White Sea,		
R. Volga to R. Don, and Black Sea,		
Prussia.		
R. Vistula to Rivers Oder, Spree, Havel, and Elbe.	77	
Denmark.		
Kiel, on the Baltic Sea, to R. Eyder.	23	10?
Holland.		
Amsterdam to the Helder, for ships,	70	125
Belgium.		
R. Meuse to R. Moselle,	178	
France.		
R. Garonne to the Mediterranean Sea,	150	64
R. Loire, to R. Seine,	78	32
R. Saone to R. Loire,	72	48
Brest to Nantes,	218	
R. Rhone to R. Rhine (3 sections of 4),	200	
Austria.		
Whole length of Canals,	831	
Spain.		
Imperial Canal along R. Ebro,	66	
Canal of Castile,	77	
Egypt.		
Alexandria to R. Nile,	48	200

- Florence Nightingale
- Ronald Fisher

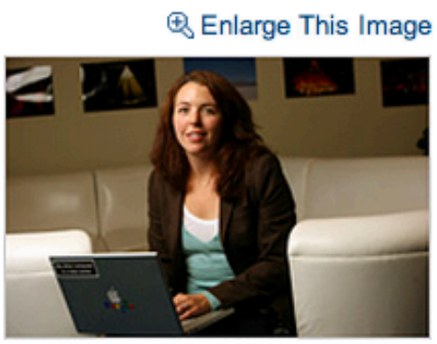
The New York Times

Technology

For Today's Graduate, Just One Word: Statistics

By STEVE LOHR
Published: August 5, 2009

MOUNTAIN VIEW, Calif. — At Harvard, Carrie Grimes majored in anthropology and archaeology and ventured to places like Honduras, where she studied Mayan settlement patterns by mapping where artifacts were found. But she was drawn to what she calls "all the computer and math stuff" that was part of the job.



Thor Swift for The New York Times

Carrie Grimes, senior staff engineer at Google, uses statistical analysis of data to help improve the company's search engine.

"People think of field archaeology as Indiana Jones, but much of what you really do is data analysis," she said.

Now Ms. Grimes does a different kind of digging. She works at Google, where she uses statistical analysis of mounds of data to come up with ways to improve its search engine.

Ms. Grimes is an Internet-age statistician, one of many who are changing the image of the profession as a place for dronish number nerds. They are finding themselves increasingly in demand — and even cool.

"I keep saying that the sexy job in the next 10 years will be statisticians," said Hal Varian, chief economist at Google. "And I'm not kidding."

The rising stature of statisticians, who can earn $125,000 at top companies in their first year after getting a doctorate, is a byproduct of the recent explosion of digital data. In field after field, computing and the Web are

Multimedia

Data Sleuths in an Internet Age

"I keep saying that the sexy job in the next 10 years will be statisticians," said Hal Varian, chief economist at Google.

"And I'm not kidding."

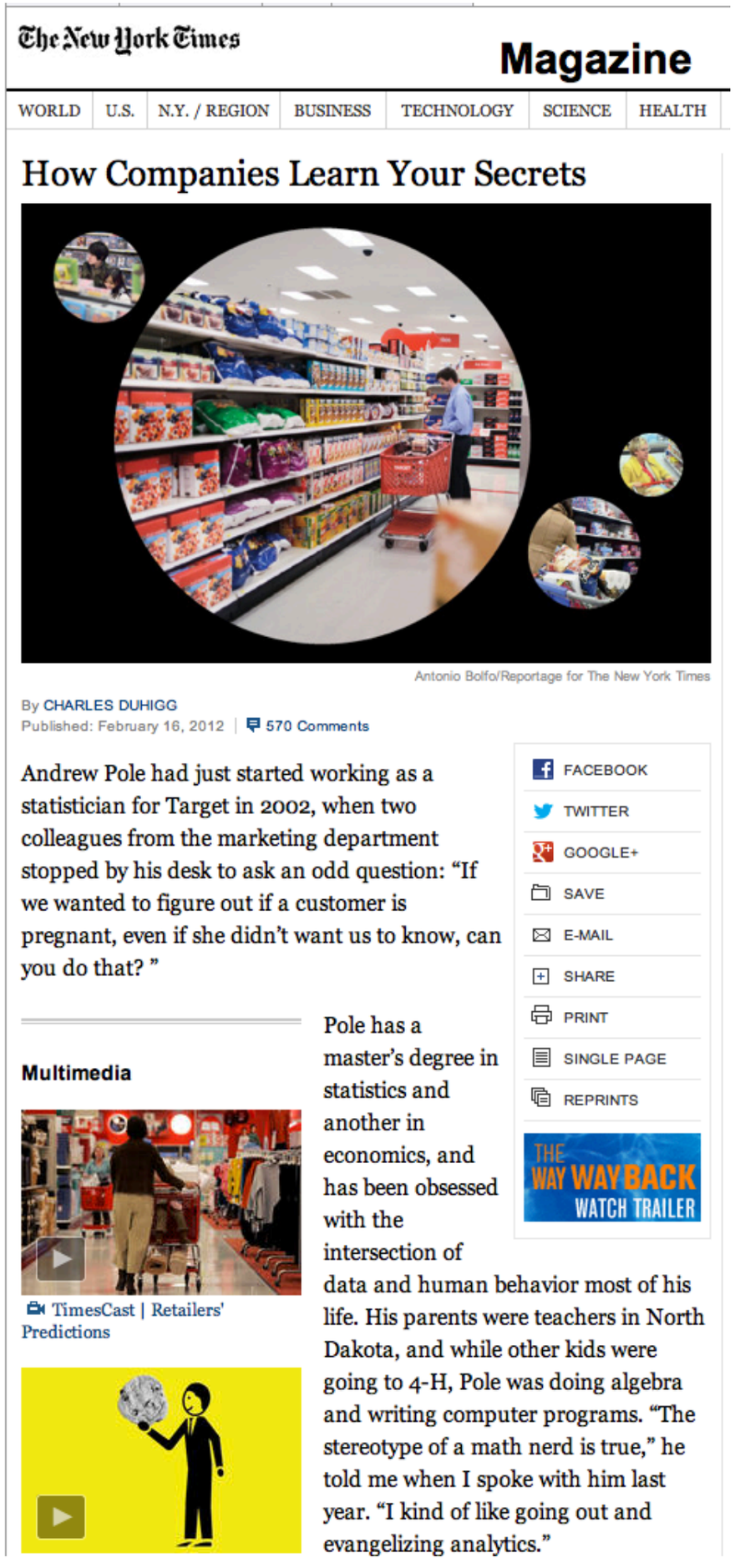
"We're rapidly entering a world where everything can be monitored and measured. But the big problem is going to be the ability of humans to use, analyze and make sense of the data."
– Erik Brynjolfsson, MIT

Er det mange statistiske modellar min kvardag?

The New York Times Magazine
February 19, 2012

How your shopping habits reveal even the most personal information. By Charles Duhigg

http://www.nytimes.com/video/2012/02/17/magazine/100000001367956/timescast--retailers-predictions.html



The New York Times Magazine

WORLD | U.S. | N.Y. / REGION | BUSINESS | TECHNOLOGY | SCIENCE | HEALTH

How Companies Learn Your Secrets

Antonio Bolfo/Reportage for The New York Times

By CHARLES DUHIGG
Published: February 16, 2012 | 570 Comments

Andrew Pole had just started working as a statistician for Target in 2002, when two colleagues from the marketing department stopped by his desk to ask an odd question: "If we wanted to figure out if a customer is pregnant, even if she didn't want us to know, can you do that? "

FACEBOOK
TWITTER
GOOGLE+
SAVE
E-MAIL
SHARE
PRINT
SINGLE PAGE
REPRINTS

THE WAY WAY BACK WATCH TRAILER

Multimedia

TimesCast | Retailers' Predictions

Pole has a master's degree in statistics and another in economics, and has been obsessed with the intersection of data and human behavior most of his life. His parents were teachers in North Dakota, and while other kids were going to 4-H, Pole was doing algebra and writing computer programs. "The stereotype of a math nerd is true," he told me when I spoke with him last year. "I kind of like going out and evangelizing analytics."

About a year after Pole created his pregnancy-prediction model, a man walked into a Target outside Minneapolis and demanded to see the manager. He was clutching coupons that had been sent to his daughter, and he was angry, according to an employee who participated in the conversation.

"My daughter got this in the mail!" he said. "She's still in high school, and you're sending her coupons for baby clothes and cribs? Are you trying to encourage her to get pregnant?"

The manager didn't have any idea what the man was talking about. He looked at the mailer. Sure enough, it was addressed to the man's daughter and contained advertisements for maternity clothing, nursery furniture and pictures of smiling infants. The manager apologized and then called a few days later to apologize again.

On the phone, though, the father was somewhat abashed. "I had a talk with my daughter," he said. "It turns out there's been some activities in my house I haven't been completely aware of. She's due in August. I owe you an apology."

"It's like an arms race to hire statisticians nowadays," said Andreas Weigend, the former chief scientist at Amazon.com. "Mathematicians are suddenly sexy."

From Harvard Business Review (lenke)

ARTWORK: TAMAR COHEN, ANDREW J BUBOLTZ, 2011, SILK SCREEN ON A PAGE FROM A HIGH SCHOOL YEARBOOK, 8.5" X 12"

DATA

Data Scientist: The Sexiest Job of the 21st Century

by Thomas H. Davenport and D.J. Patil

FROM THE OCTOBER 2012 ISSUE

SUMMARY | SAVE | SHARE | COMMENT 5 | TEXT SIZE | PRINT | $8.95 BUY COPIES

When Jonathan Goldman arrived for work in June 2006 at LinkedIn, the business networking site, the place still felt like a start-up. The company had just under 8 million accounts, and the number was growing quickly as existing members invited their friends and colleagues to join. But users weren't seeking out connections with the

WHAT TO READ NEXT

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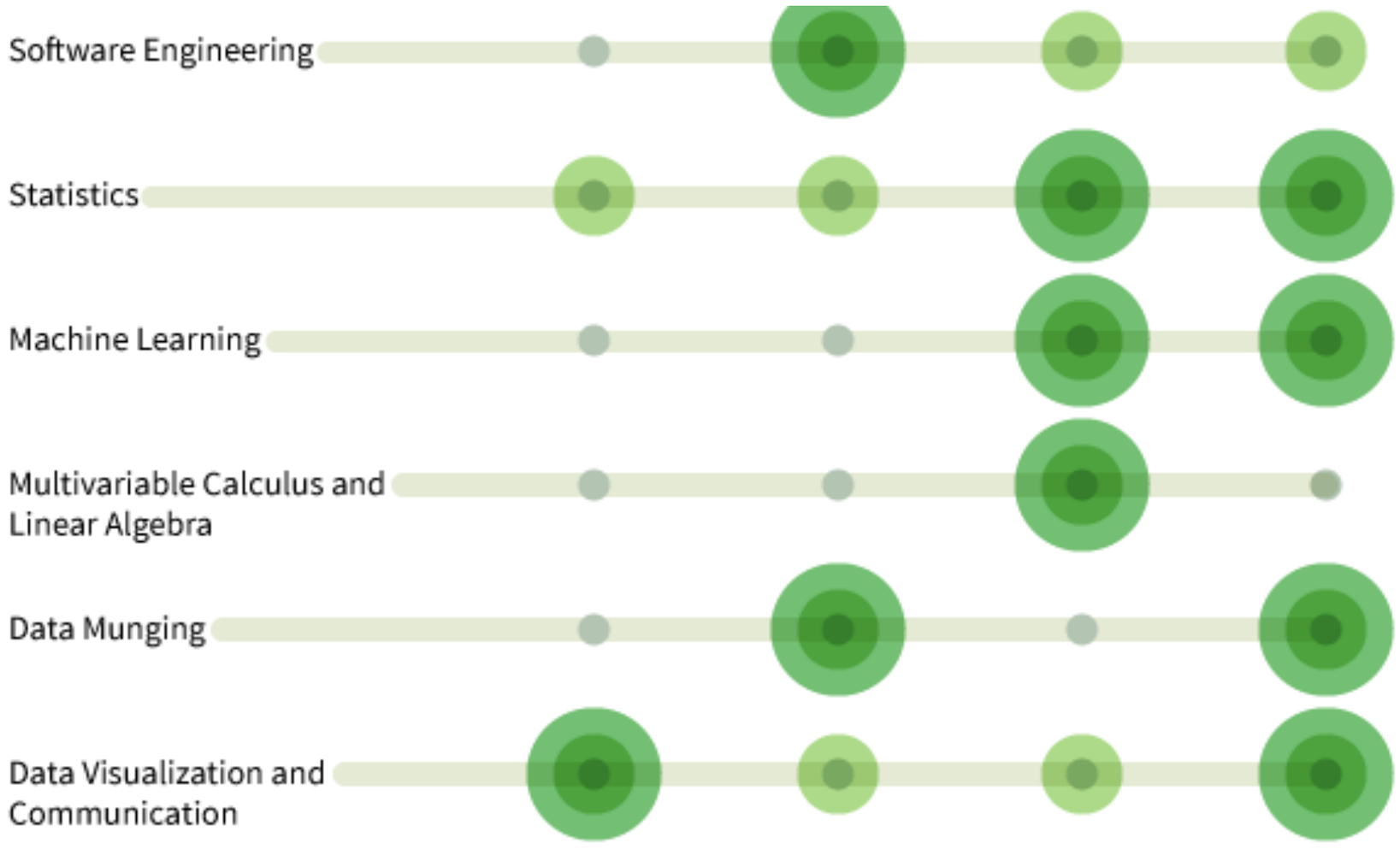
October 2012 Issue

Kva treng ein data scientist å vite?



Lenke

I

Anbefalingssystem

amazon

ring er ein tek
em

k for å **gjette**

The Netflix Prize

- oktober 2006:
- Netflix lover 1 million dollar til dei første som klarer å forbetre anbefalingssystemet deira med minst 10%
- september 2009:
- Teamet BellKor vinn med systemet "Pragmatic Chaos"

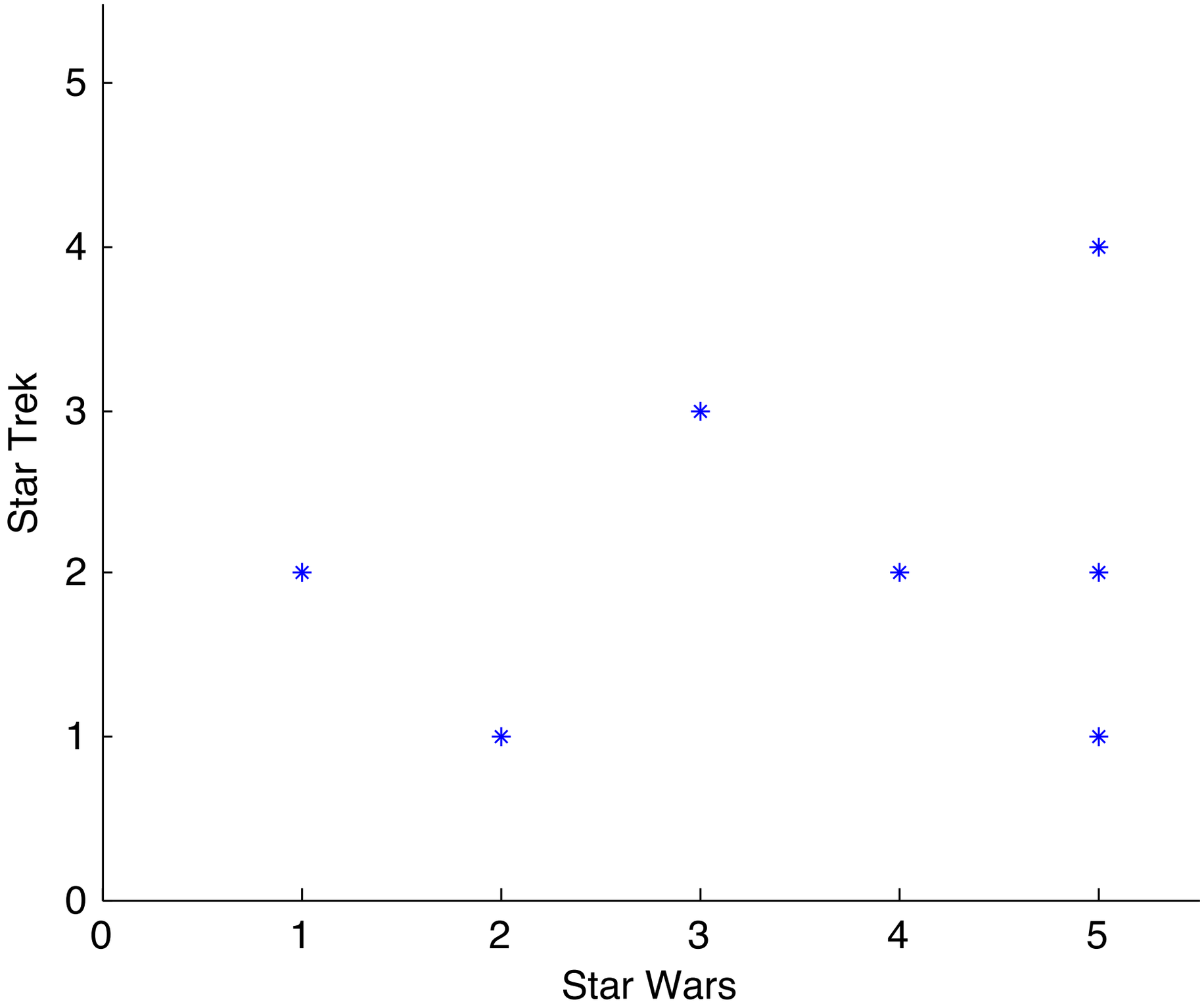
- Netflix-kunder kan gje vurderingar av filmar
  - 1, 2, 3, 4 eller 5 stjerner
- Oppgåva: Gjett kor mange stjerner ein brukar vil gje til ein film
- Treningsdata i konkurransen
  - 100 480 507 vurderingar
  - som 480 189 brukarar gav til
  - 17 770 filmar
- Systema prøver å gjette
- 1 408 789 ukjente vurderingar

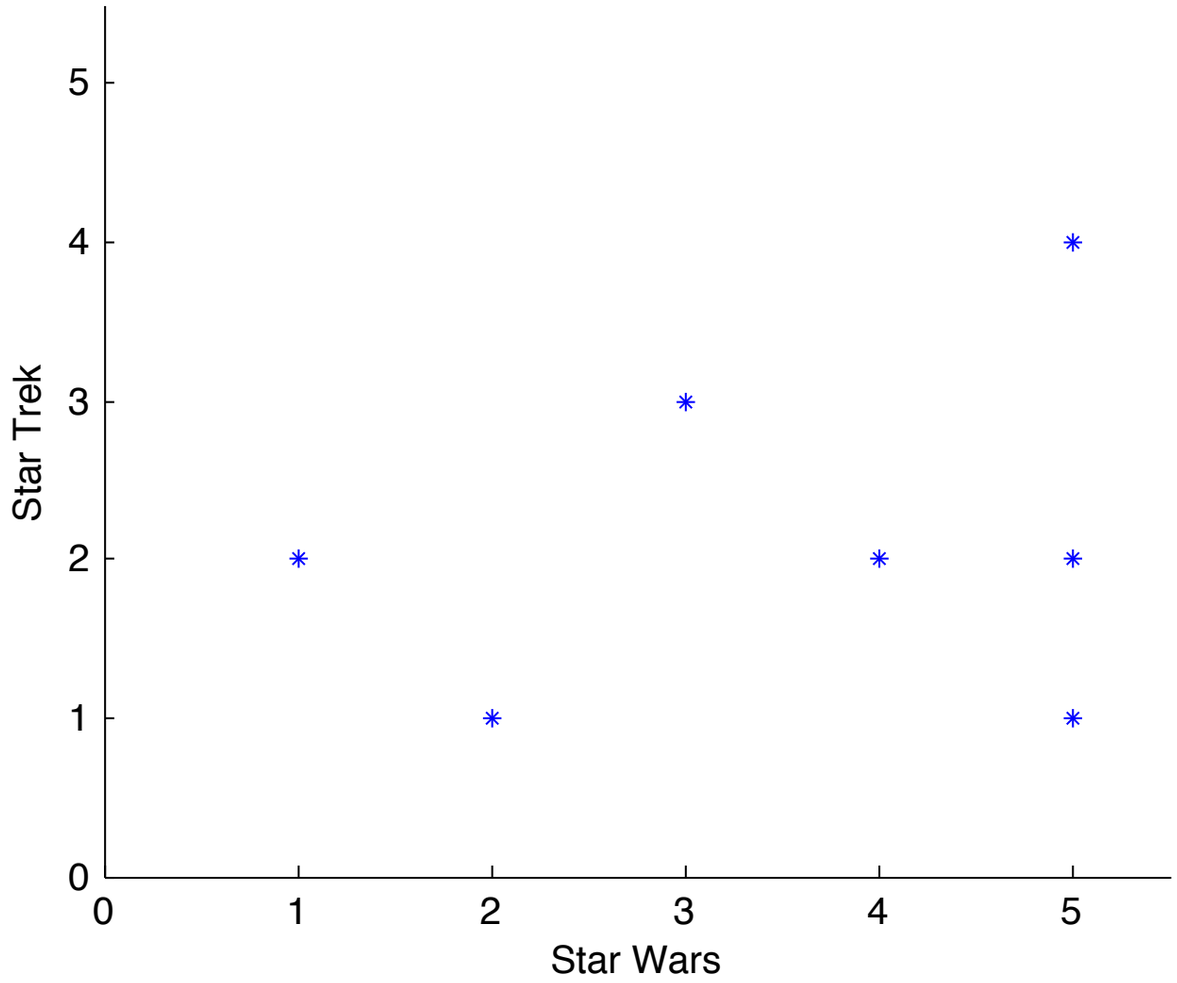
Matrix Completion problems

	Star Wars	*Star Trek*		
Per	5	4	?	…
Ola	3	?	2	…
Kari	4	2	?	…
	⋮	⋮	⋮	…

- Korleis fylle inn dei ukjente verdiane?

Filmar og brukarar i eit vektorrom





- det totale vektorrommet har like mange dimensjonar som det er filmar
  - for konkurransen: nesten 18 000!

- Nærmaste nabo-metoden
  - For å gjette mi vurdering av ein film: ta gjennomsnittet av vurderingane til dei nærmeste naboane mine.

Kor bra fungerer dette?

- Pragmatic Chaos-systemet ga en root mean squared error (RMSE) på 0.86
  - Ganske bra

Statistisk maskinoversetting

Maskinoversettelse

- Maskinoversettelse er automatisk oversetting av tekst frå eit språk til eit anna.
- Første forsøk på 1950-talet, mellom engelsk og russisk
  - Dei første systema var regelbaserte, og ganske dårlege

- På 1990-tallet begynte særleg IBM å forske på statistiske rammeverk
  - Dei siste åra har dette arbeidet ført til system som fungerer
    - særlig pga. Google

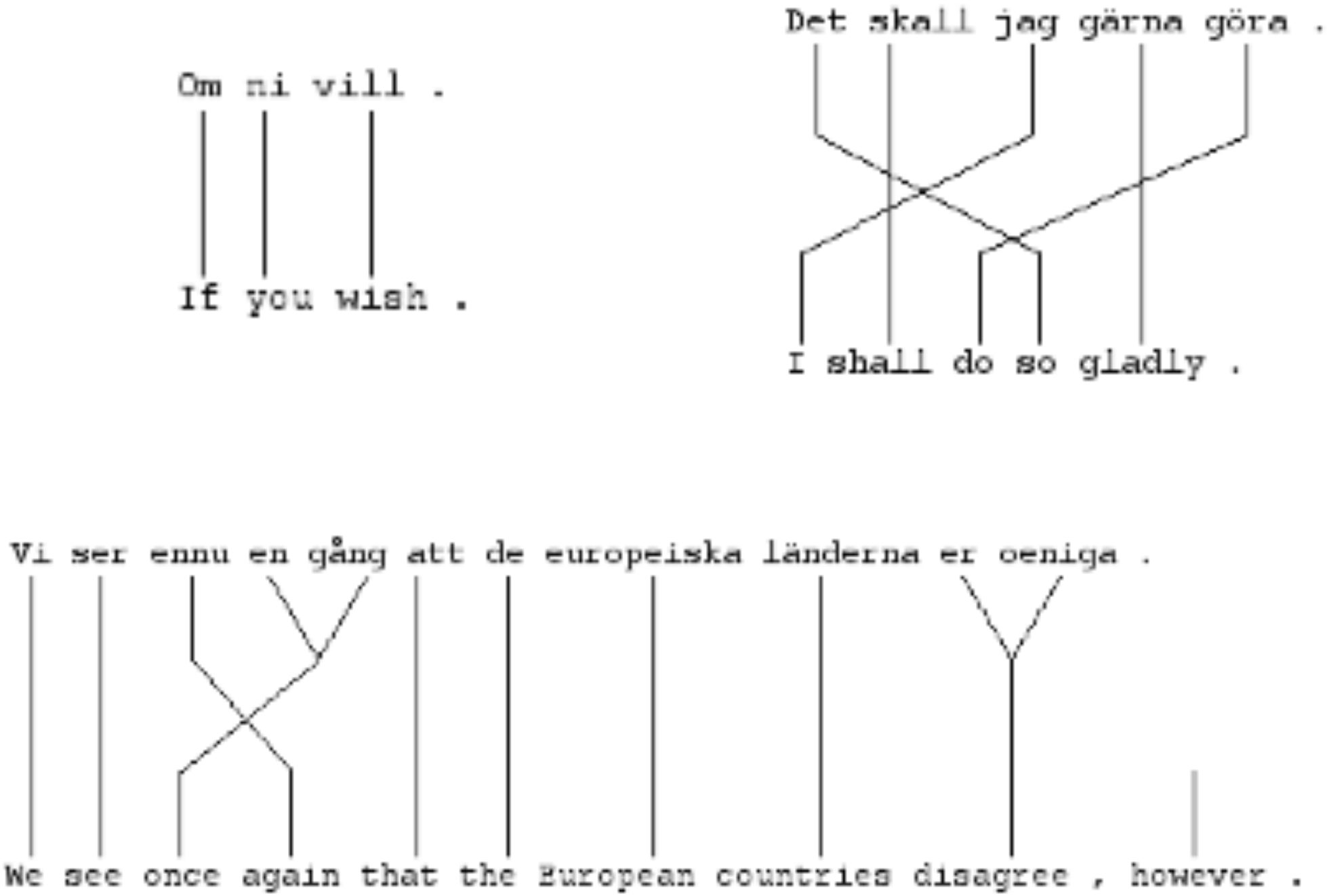
- før: menneske prøvde å hardkode reglar for alle molege språk og variasjonar
- no: maskiner prøver å lære sammenhengane mellom språk av seg sjølv

Parallell tekst

1 Resumption of the session
2 I declare resumed the session of the European Parliament adjourned on Friday 17 December 1999, and I would like once again to wish you a happy new year in the hope that you enjoyed a pleasant festive period .
3 Although , as you will have seen , the dreaded ' millennium bug ' failed to materialise , still the people in a number of countries suffered a series of natural disasters that truly were dreadful .
4 You have requested a debate on this subject in the course of the next few days , during this part - session .
5 In the meantime , I should like to observe a minute ' s silence , as a number of Members have requested , on behalf of all the victims concerned , particularly those of the terrible storms , in the various countries of the European Union .
6 Please rise , then , for this minute ' s silence .
7 (The House rose and observed a minute ' s silence)
8 Madam President , on a point of order .
9 You will be aware from the press and television that there have been a number of bomb explosions and killings in Sri Lanka .
10 One of the people assassinated very recently in Sri Lanka was Mr Kumar Ponnambalam , who had visited the European Parliament just a few months ago .
11 Would it be appropriate for you , Madam President , to write a letter to the Sri Lankan President expressing Parliament 's regret at his and the other violent deaths in Sri Lanka and urging her to do everything she possibly can to seek a peaceful reconciliation to a very difficult situation ?
12 Yes , Mr Evans , I feel an initiative of the type you have just suggested would be entirely appropriate .

1 Återupptagande av sessionen
2 Jag förklarar Europaparlamentets session återupptagen efter avbrottet den 17 december . Jag vill på nytt önska er ett gott nytt år och jag hoppas att ni haft en trevlig semester .
3 Som ni kunnat konstatera ägde "␣den␣stora␣år␣2000␣-␣buggen␣" aldrig rum . Däremot har invånarna i ett antal av våra medlemsländer drabbats av naturkatastrofer som verkligen varit förskräckliga .
4 Ni har begärt en debatt i ämnet under sammanträdesperiodens kommande dagar .
5 Till dess vill jag att vi , som ett antal kolleger begärt , håller en tyst minut för offren för bl.a. stormarna i de länder i Europeiska unionen som drabbats .
6 Jag ber er resa er för en tyst minut .
7 (Parlamentet höll en tyst minut) .
8 Fru talman ! Det gäller en ordningsfråga .
9 Ni känner till från media att det skett en rad bombexplosioner och mord i Sri Lanka .
10 En av de personer som mycket nyligen mördades i Sri Lanka var Kumar Ponnambalam , som besökte Europaparlamentet för bara några månader sedan .
11 Skulle det vara möjligt för er , fru talman , att skriva ett brev till den srilankesiska presidenten i vilket parlamentets beklagande uttrycks över hans och de övriga brutala dödsfallen i Sri Lanka och uppmanar henne att göra allt som står i hennes makt för att få en fredlig lösning på en mycket komplicerad situation ?
12 Ja , herr Evans , jag tror att ett initiativ i den riktning ni just föreslagit skulle vara mycket lämpligt .

Parallell tekst



Oversettelse ved Bayes' regel!

- Vi vil oversette ei svensk setning **f** til ei engelsk setning **e**.
- P(**e**): sannsynet for setningen **e**
  - dvs. kor sannsynleg det er at ein engelskmann ville ha skrevet setninga **e**
- P(**f**): sannsynet for setninga **f**
- P(**e**|**f**): sannsynet for at **f** blir oversatt til **e**
- P(**f**|**e**): sannsynet for at **e** blir oversatt til **f**
- Då sier Bayes' regel at

$$P(\mathbf{e}|\mathbf{f}) = \frac{P(\mathbf{e})P(\mathbf{f}|\mathbf{e})}{P(\mathbf{f})}$$

Oversettelse ved Bayes' regel!

$$P(\mathbf{e}|\mathbf{f}) = \frac{P(\mathbf{e})P(\mathbf{f}|\mathbf{e})}{P(\mathbf{f})}$$

- Vi vet hva **f** er, så vi bryr oss ikke om P(**f**).

$$P(\mathbf{e}|\mathbf{f}) \propto P(\mathbf{e})P(\mathbf{f}|\mathbf{e})$$

- Så vi velger den oversettelsen **e**, som gjør P(**e**)P(**f**|**e**) størst mulig.

$$\hat{\mathbf{e}} = \arg\max_{\mathbf{e}} P(\mathbf{e})P(\mathbf{f}|\mathbf{e})$$

Hvorfor bruke Bayes'?

$$P(\mathbf{e}|\mathbf{f}) \propto P(\mathbf{e})P(\mathbf{f}|\mathbf{e})$$

- Kvifor ikkje maksimere *P*(**e**|**f**) direkte?
  - Bayes' lar oss dele opp eit vanskeleg problem i to lettare delar
- *P*(**f** |**e**) konsentrerer seg om korrektheit (meining)
  - oversettingsmodellen
- *P*(**e**) konsentrerer seg om velformetheit (grammatikk)
  - språkmodellen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זהירות! מים עמוקים
סמוך לחוף
احذروا مياه عميقه بجانب الشاطى
noun area bathing
adjective forbidden


Translate server error
餐 厅

Korleis kan statistikk vere/bli viktig for meg på jobb?