PRG
PRAGUE

Everything you know is wrong: Understanding technology, scholarship and librarianship in a world of ubiquitous information access

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Learning to unlearn: Understanding technology, scholarship and librarianship in a world of ubiquitous information access

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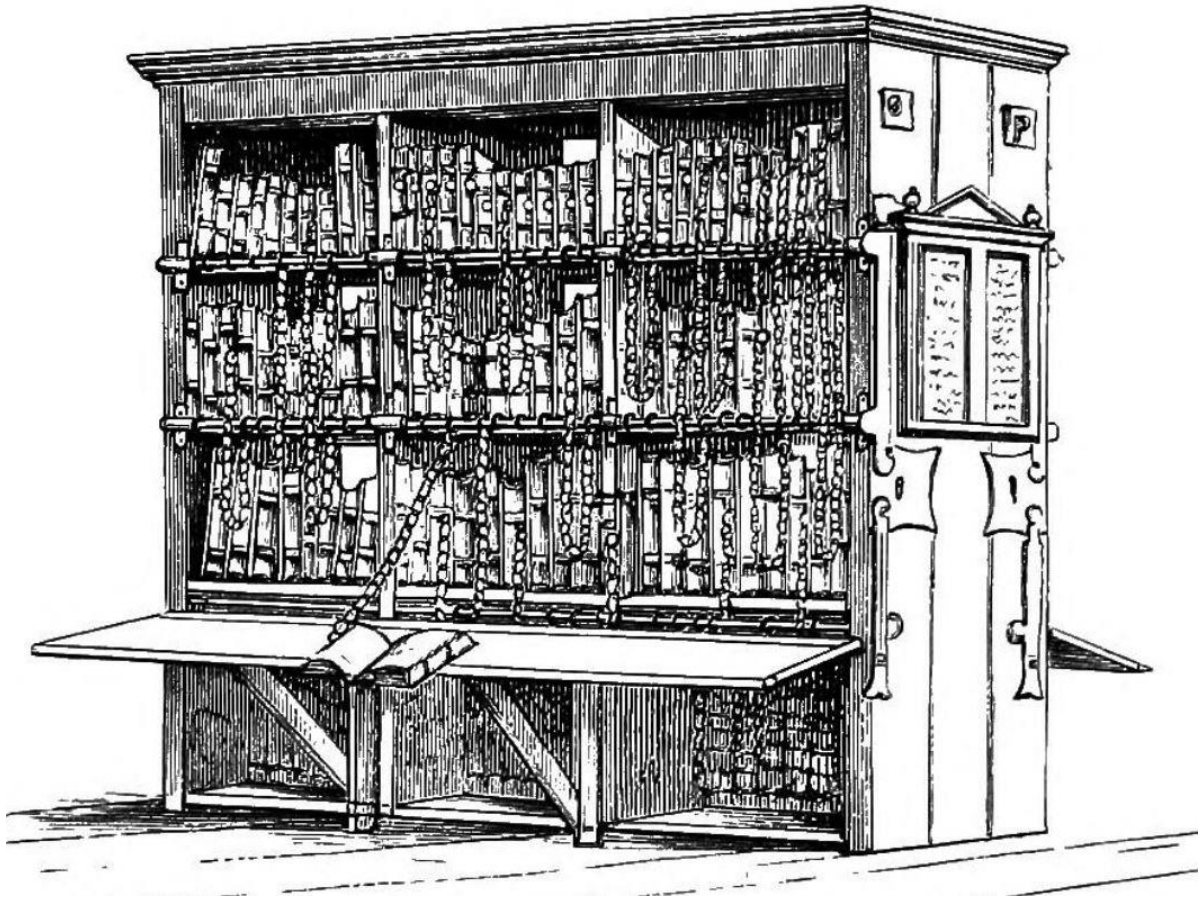
Once upon a time, this was a library



This is not a lending library

When information was scarce

- Librarians were gatekeepers
- People had to physically go to the library
- Elitism was almost expected
- Information was contained in books
- Journal articles were scholarly
- Tabloids were often wrong
  - And still are

Now that information is ubiquitous

- Information is abundant, available to everybody
- Search is commonplace; everyone has an online life
- Your phone is a library
- Everyone is an information professional
- Everybody thinks they’re an expert searcher
- Libraries are no longer a sacred space

Multiple devices

- Information can be accessed from multiple devices
- But what displays is not consistent
- Optimizing for mobile
- Personalization

Technologies in the new information world

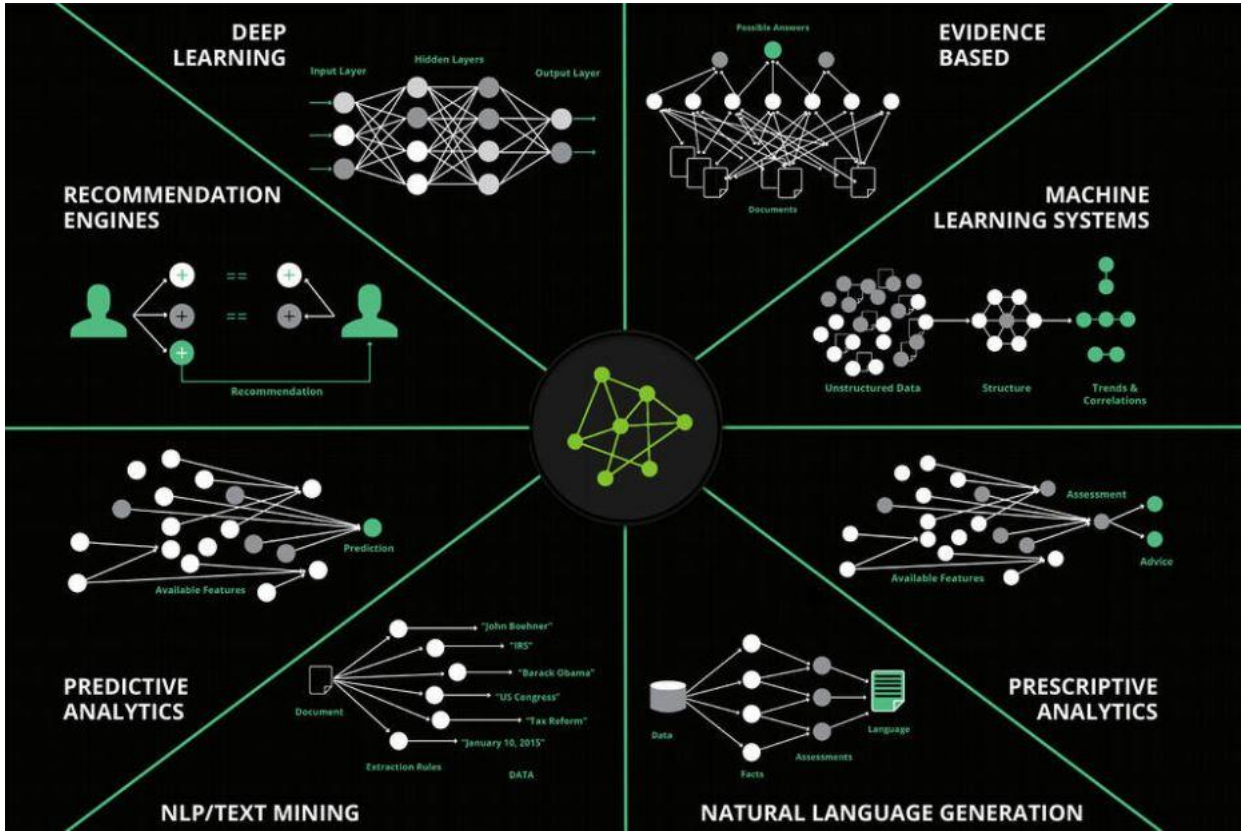
- Artificial/Augmented intelligence (AI)
- Cognitive computing/Cognitive search
- Semantic search/Intelligent search
- Machine learning/Deep learning
- Predictive analytics/Text analytics
- Internet of Things
- Robots

Will robots staff libraries?

- Shelving
- Voice technology
  - Alexa
  - Echo
- Biometric self-checkout
- Remote authentication

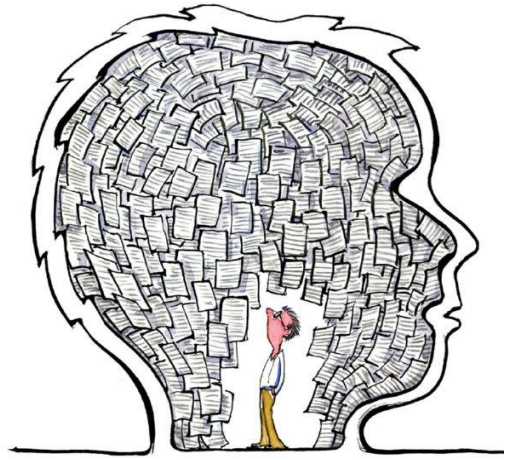
Artificial/Augmented intelligence

- Includes a number of different but related and intertwined technologies
- Algorithmic writing
- Pattern recognition
- Not new



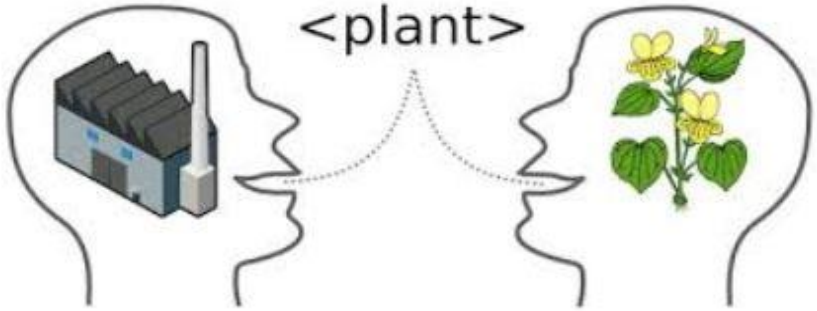
Cognitive computing/cognitive search

- Knowing intent of search
- Initially popularized by IBM with its Watson technology
  - Healthcare, finance, libraries
- Conversational, contextual
- Augmented intelligence
- New discoveries
- Gale using in Digital Scholar Lab



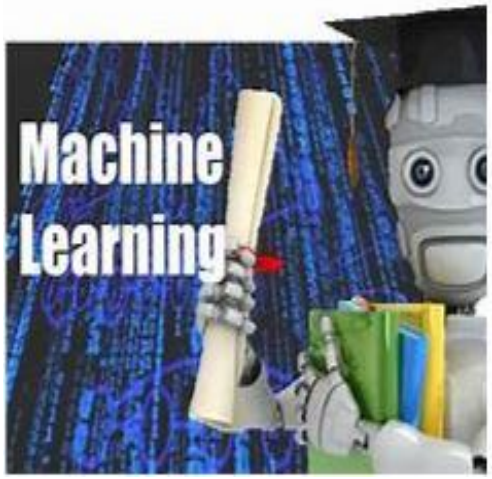
Semantic search/Intelligent search

- Understanding context
- Subscription databases respond literally
- Web search analyzes meaning, aboutness
- Normalization of names



Machine learning

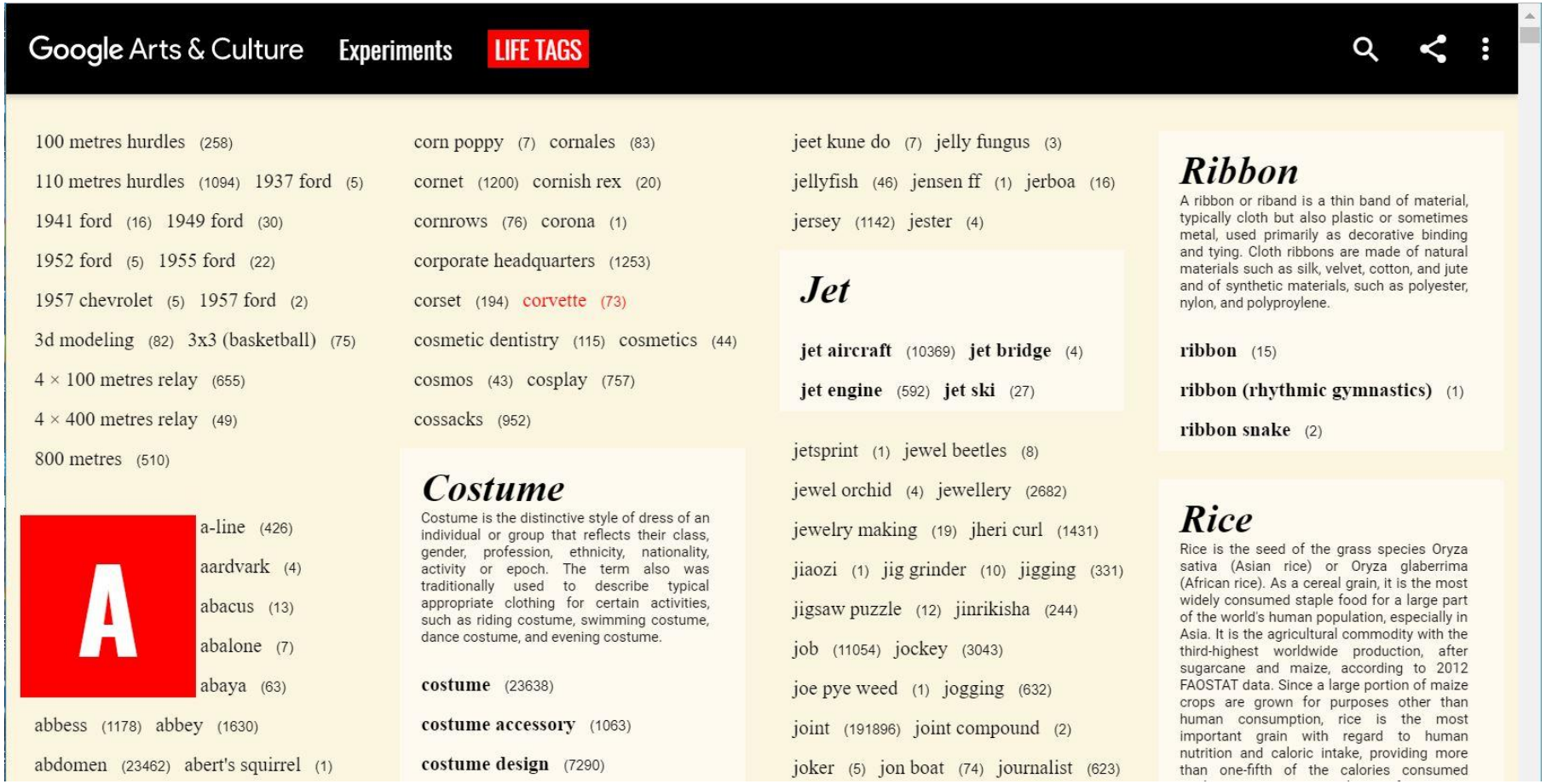
- Used in both subscription databases and web search engines
- Subscription databases
  - Did you mean?
  - Others searched for …
- Web search
  - Algorithms based on popular search queries
  - That aren’t done by librarians
  - Or in Czech
  - Relevance implications



Deep learning

- Sentiment analysis
- Photo indexing
  - https://experiments.withgoogle.com/moma
- Big Data analysis
- Deep neural networks
- Advanced deepfaking
  - Beyond “fake news”
  - Photoshop for video

Tags


Google Arts & Culture
Experiments
LIFE TAGS
100 metres hurdles (258)
110 metres hurdles (1094) 1937 ford (5)
1941 ford (16) 1949 ford (30)
1952 ford (5) 1955 ford (22)
1957 chevrolet (5) 1957 ford (2)
3d modeling (82) 3x3 (basketball) (75)
4 × 100 metres relay (655)
4 × 400 metres relay (49)
800 metres (510)
A
a-line (426)
aardvark (4)
abacus (13)
abalone (7)
abaya (63)
abbess (1178) abbey (1630)
abdomen (23462) abert's squirrel (1)
corn poppy (7) cornales (83)
cornet (1200) cornish rex (20)
cornrows (76) corona (1)
corporate headquarters (1253)
corset (194) corvette (73)
cosmetic dentistry (115) cosmetics (44)
cosmos (43) cosplay (757)
cossacks (952)
Costume
Costume is the distinctive style of dress of an individual or group that reflects their class, gender, profession, ethnicity, nationality, activity or epoch. The term also was traditionally used to describe typical appropriate clothing for certain activities, such as riding costume, swimming costume, dance costume, and evening costume.
costume (23638)
costume accessory (1063)
costume design (7290)
jeet kune do (7) jelly fungus (3)
jellyfish (46) jensen ff (1) jerboa (16)
jersey (1142) jester (4)
Jet
jet aircraft (10369) jet bridge (4)
jet engine (592) jet ski (27)
jetsprint (1) jewel beetles (8)
jewel orchid (4) jewellery (2682)
jewelry making (19) jheri curl (1431)
jiaozi (1) jig grinder (10) jigging (331)
jigsaw puzzle (12) jinrikisha (244)
job (11054) jockey (3043)
joe pye weed (1) jogging (632)
joint (191896) joint compound (2)
joker (5) jon boat (74) journalist (623)
Ribbon
A ribbon or riband is a thin band of material, typically cloth but also plastic or sometimes metal, used primarily as decorative binding and tying. Cloth ribbons are made of natural materials such as silk, velvet, cotton, and jute and of synthetic materials, such as polyester, nylon, and polyproylene.
ribbon (15)
ribbon (rhythmic gymnastics) (1)
ribbon snake (2)
Rice
Rice is the seed of the grass species Oryza sativa (Asian rice) or Oryza glaberrima (African rice). As a cereal grain, it is the most widely consumed staple food for a large part of the world's human population, especially in Asia. It is the agricultural commodity with the third-highest worldwide production, after sugarcane and maize, according to 2012 FAOSTAT data. Since a large portion of maize crops are grown for purposes other than human consumption, rice is the most important grain with regard to human nutrition and caloric intake, providing more than one-fifth of the calories consumed

Predictive analytics/Text analytics

- Finding patterns and trends in historical data to predict the future
- Could affect collection development, budgets, staffing
- Learning dashboards
- Contracts
- Because things have happened in the past
- Will they in future?

Internet of Things

- Sensors are everywhere
- More sensor data coming
- What if your appliances talk to each other?
- Beacons in libraries can show popular place

Why do we need libraries today?

- Electronic resources take up less space
- Invisibility
  - Of resources
  - Of reference desk
  - Of librarians
- “Everything is on the internet”
  - Hint: No, it isn’t

Why do we need librarians?

- What value do librarians bring?
- We make the invisible visible
- We understand the structure of information
- But do we really?
- A strong component of our value is our values
- We need to understand new technology to evaluate how they fit with our values as a profession
- Sometimes our users know more than we do
  - Sometimes they are ahead of us, sometimes not

What are our roles going forward

- Information advisors
- Research data preservers
- Assessment officers
- Metadata consultants; Taxonomists
- Scholarly communication experts
- Marketing professionals
- Data analysts/Data creators
- Curators
- Publishers
- Negotiators
- Quality arbitrators
- Digital humanities researchers
- Visionaries

Is everything you know wrong?

- Boolean logic
- Structure of information
- Subscription databases
- Who's in control
- Pursuit of technology for the sake of technology

Crisis

- Distrust of experts
- What you feel becomes what you think becomes your reality
- Deliberately faked scholarly research to expose predatory publishers
  - Backfired
- Belief in librarians' abilities waning

Gold medalist

Different muscles

How we learn and unlearn

- By reading
- By doing
- By listening
- By being open minded
- By using different muscles

Learning to unlearn

- Be willing to admit there are things you don’t know
- The way we’ve always done it may not be the best way any more
- Recognize that machines do some things much better than humans
- But computers lack empathy
- Embrace technology, experiment, go with what works, throw out what doesn’t
- It’s not just unlearning; it’s relearning

What are you waiting for?

- Godot?

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