

Demystifying AI

Everything You Wanted to Know About AI But Were Too Afraid to Ask

Jovan Kurbalija

Geneva | 16 April 2024



Understanding

AI

via

FLAGS

JUNE 12, 2023

TIME

THE END OF

HUMANITY

HOW REAL IS THE RISK?

A SPECIAL REPORT

time.com

Sam Altman

aims to get for
chip production

US\$ 7 trillion



Africa

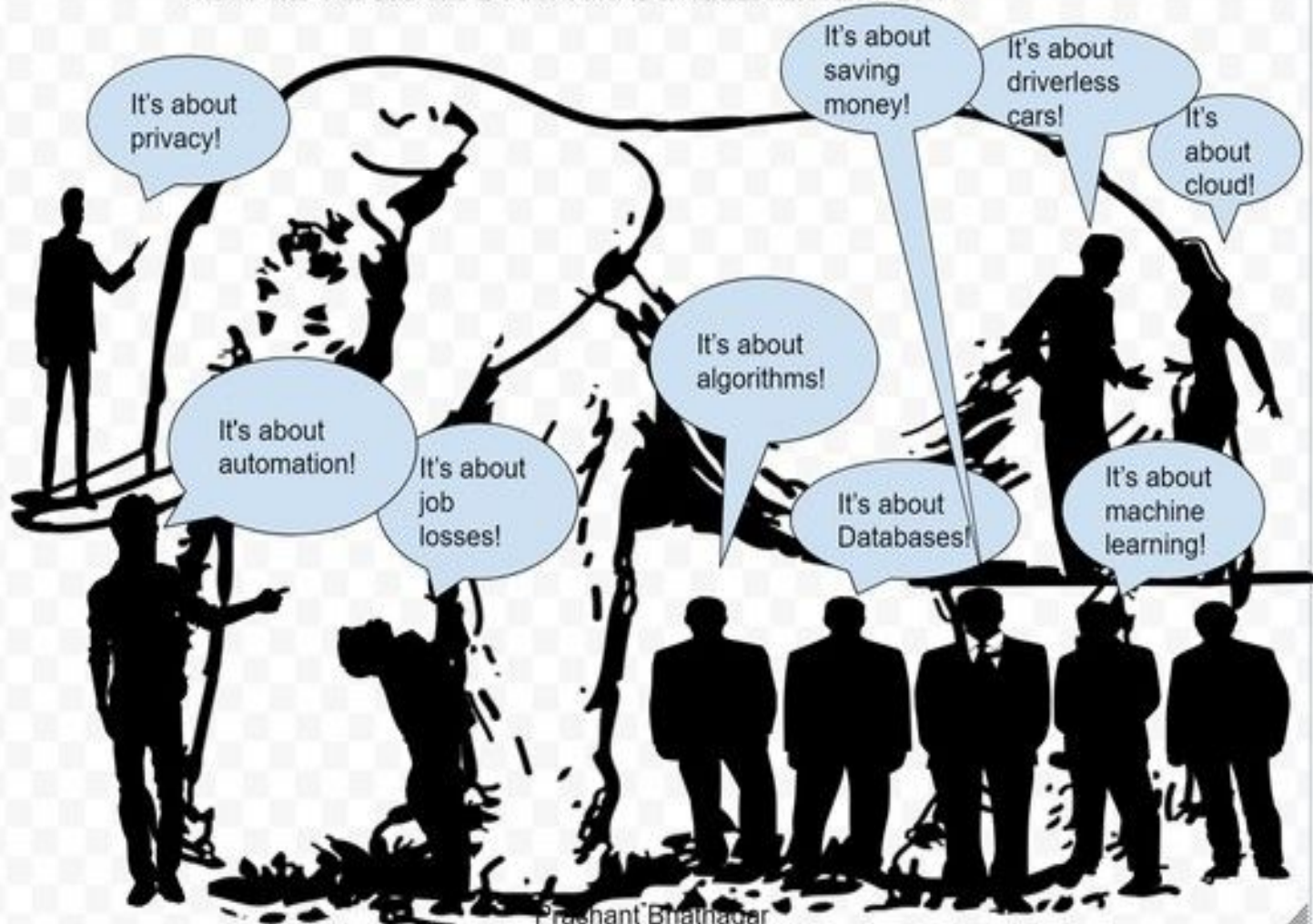
GDP of the entire African
continent in 2023 is

US\$ 3 trillion



Houston, we have a problem | Corto Maltese may help us!

HOW WE UNDERSTAND ARTIFICIAL INTELLIGENCE TODAY!



TECHNOLOGY

Technology

How does AI function?



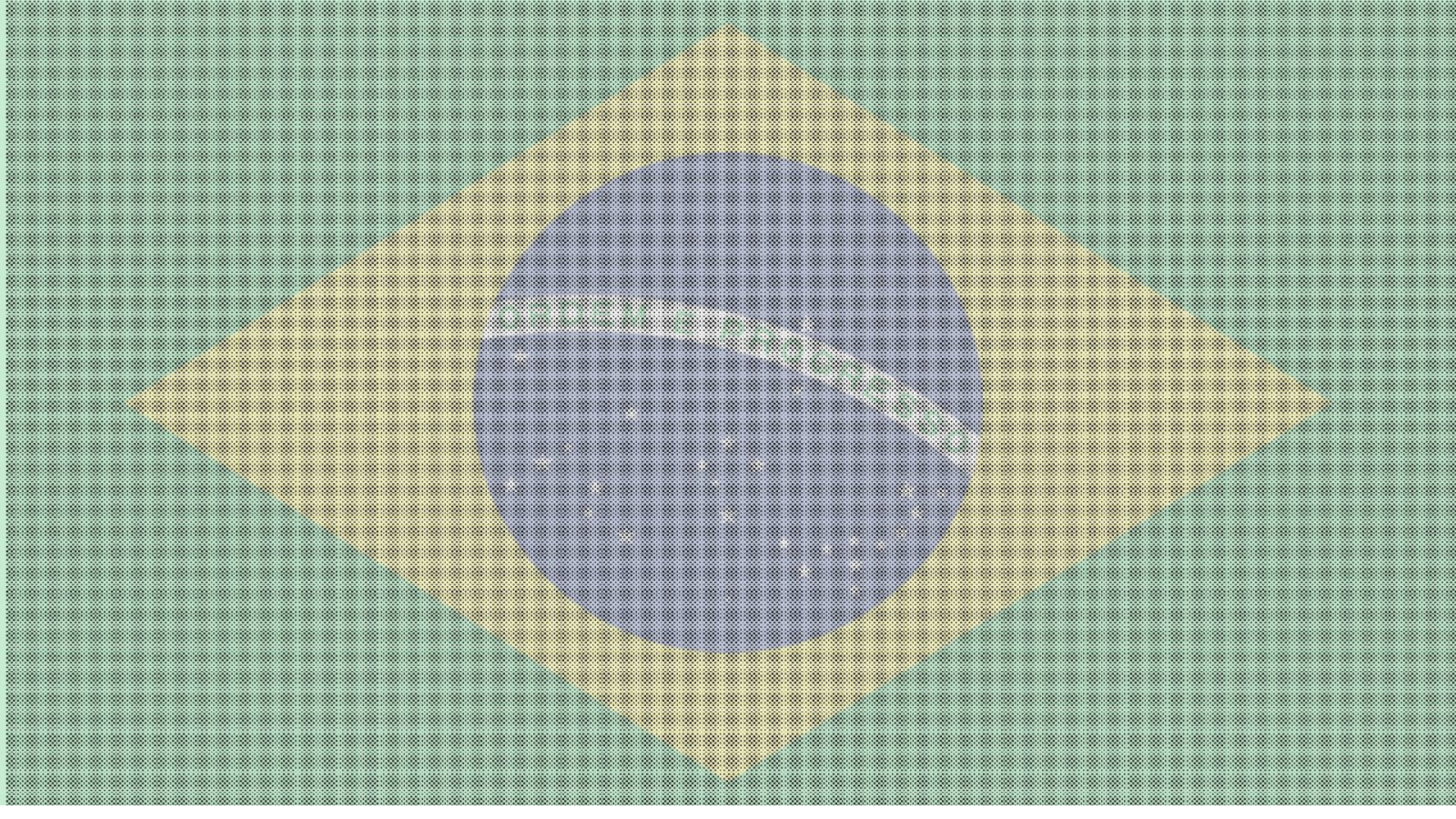
Two Conceptual Pillars of AI

PATTERNS

PROBABILITY



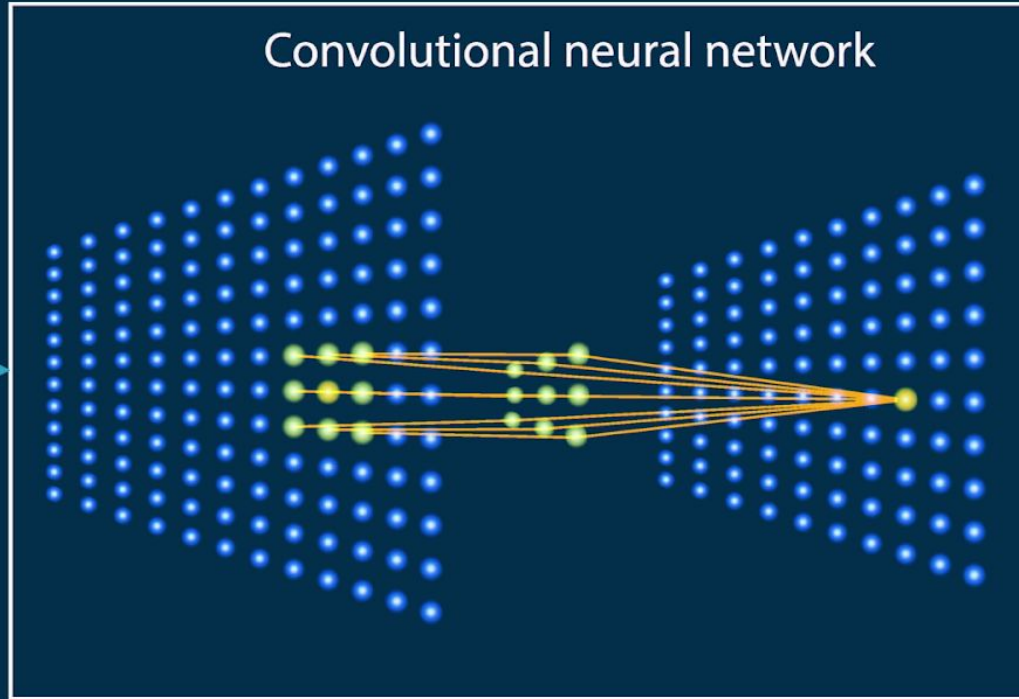




Different shapes of letter 'P' gathered during pre-training of foundational model from from books, handwritings and other sources



Classification



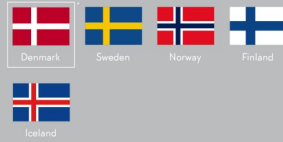
**Flag of
Brazil**

- **Green field:** Represents the House of Braganza, the dynasty of Pedro I, the first Emperor of Brazil.
- **Yellow rhombus:** Represents the House of Habsburg, the family of Maria Leopoldina, Pedro I's wife.
- **Blue circle:** Represents the sky over Rio de Janeiro on 15 November 1889, the day of the Proclamation of the Republic of Brazil.
- **27 small stars:** Represent the 26 Brazilian states and the Federal District.
- **The constellation of the Southern Cross:** The most significant constellation in the Southern Hemisphere and a symbol of the Brazilian sky.
- **White band:** Represents unity and the nation's commitment to progress.
- **National motto 'Ordem e Progresso':** Portuguese for 'Order and Progress', signifying the desire for a harmonious and prosperous nation.



Flags of Families

SCANDINAVIAN CROSS



BELGRANO



MIRANDA



PAN-IRANIAN



PAN-SLAVIC



PAN-ARAB



PAN-AFRICAN

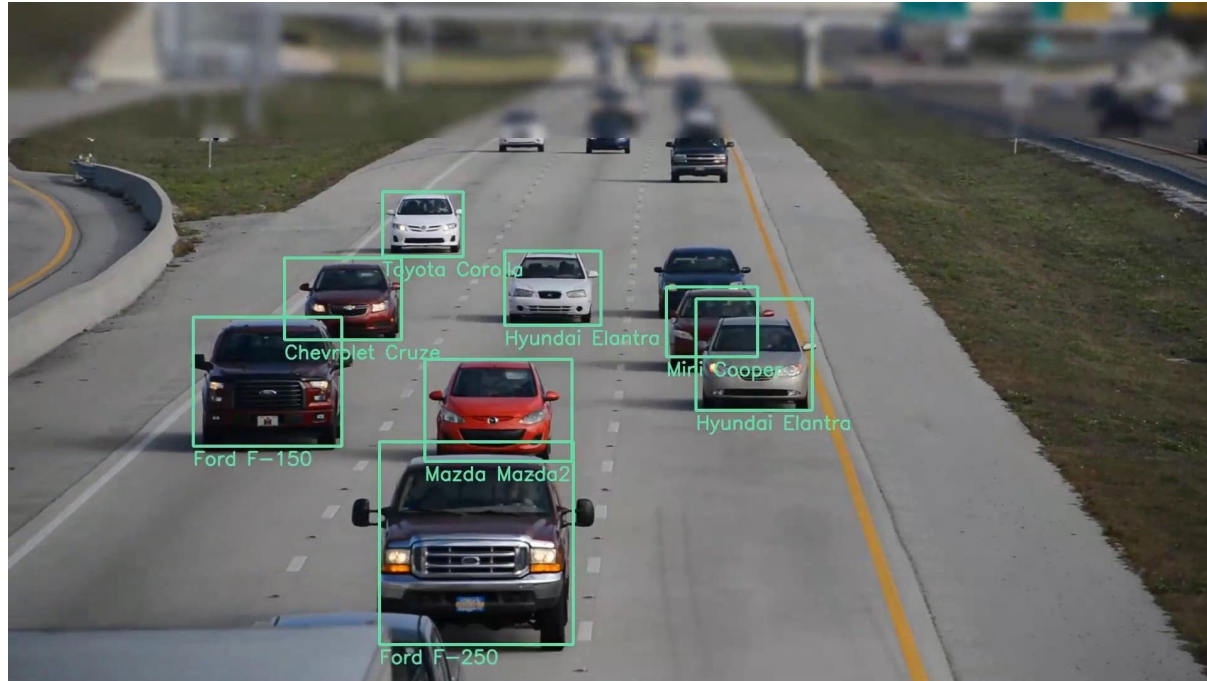


*Boxed flags are the first ones of its family

*Pan-Arab family originates from the Arab Revolt from 1916, which is almost identical to the Palestinian flag

Source: Wikipedia

REAL-LIFE AI EXAMPLES



REAL-LIFE AI EXAMPLES

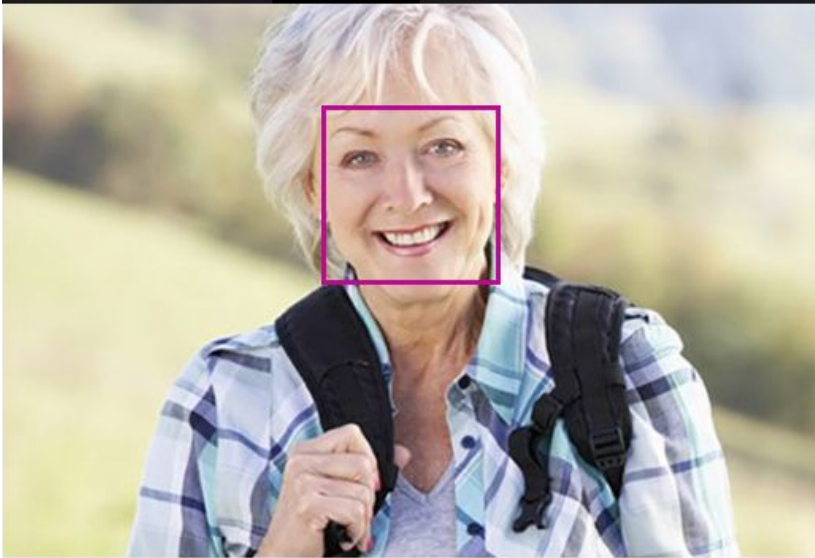


Image URL

Submit

 Browse

Image URL

Submit

 Browse

Verification result: The two faces belong to different people. **Confidence is 0.29593.**

National flags

National flags are

National flags are symbolic

National flags are symbolic representations

National flags are symbolic representations of

National flags are symbolic representations of countries

National flags are symbolic representations of countries,

National flags are symbolic representations of countries, with

National flags are symbolic representations of countries, with distinct

National flags are symbolic representations of countries, with distinct colours

National flags are symbolic representations of countries, with distinct colours and

National flags are symbolic representations of countries, with distinct colours and shapes

National flags are symbolic representations of countries, with distinct colours and shapes.

National flags are

- symbolic
- visual
- official

representations of

1. countries
2. states
3. nations

with distinct

- colours
- shapes

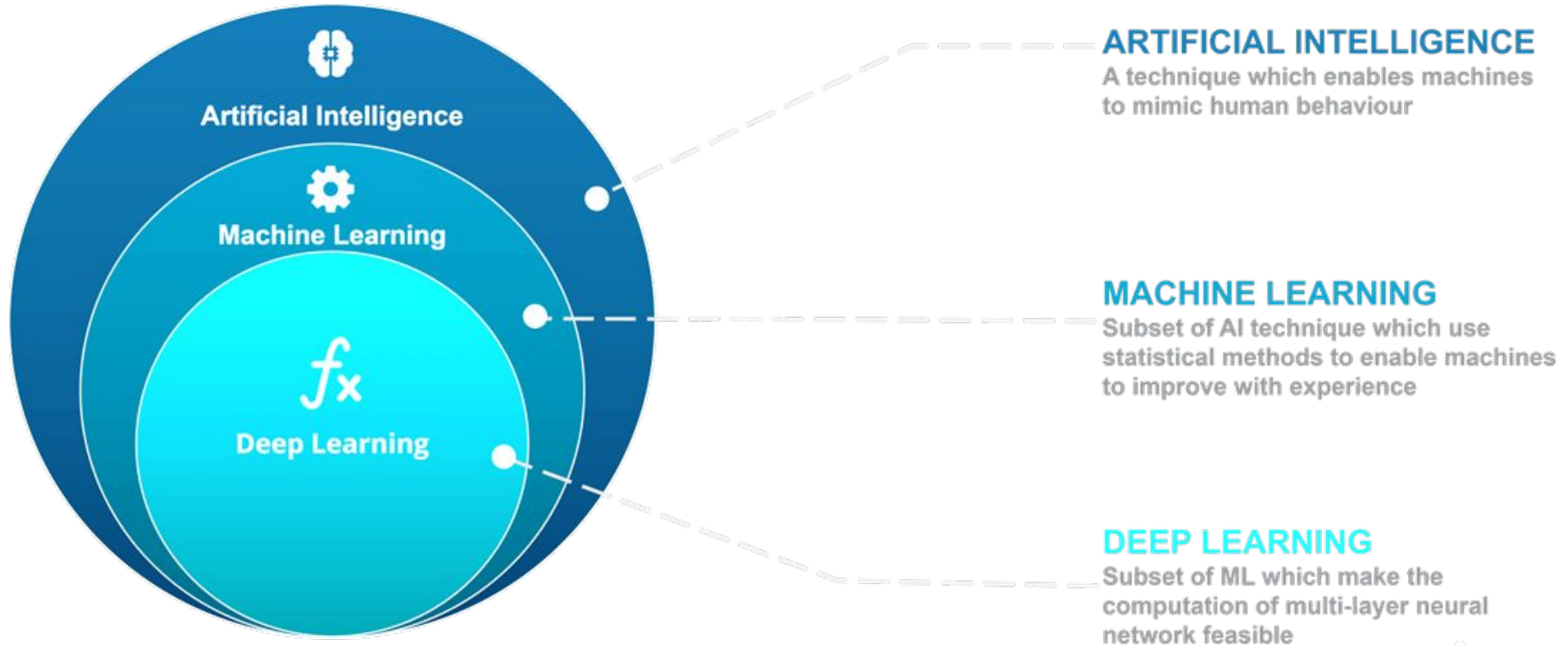
and

- shapes
- emblems

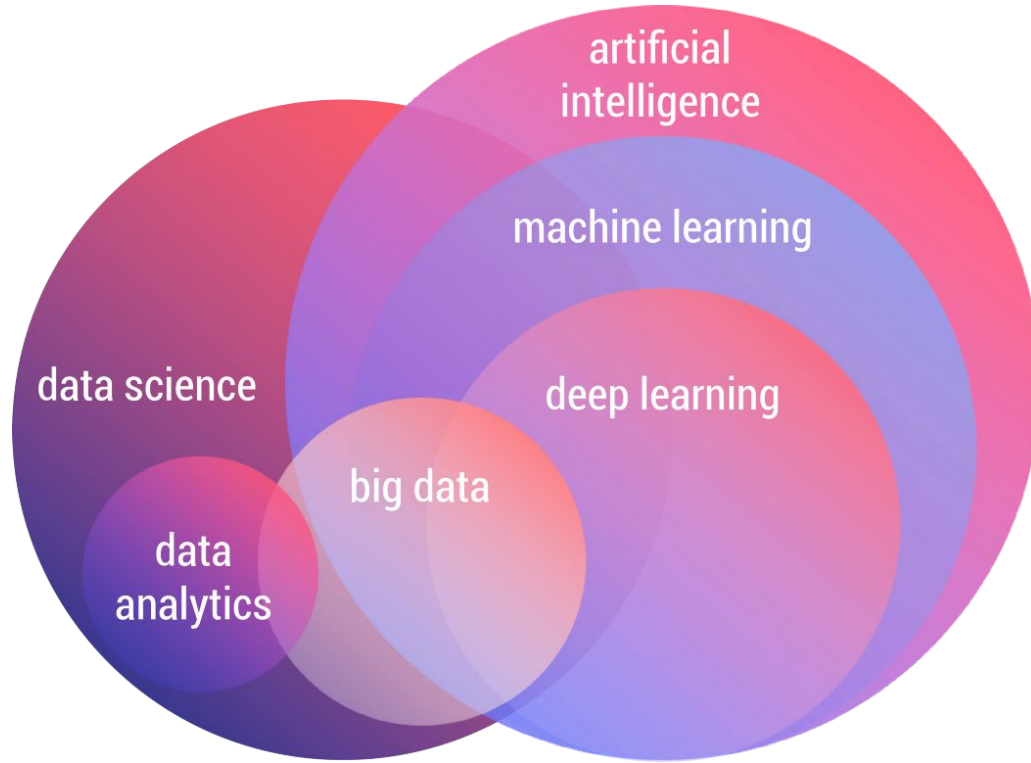
National flags are symbolic representations of countries, with distinct colours and shapes.

Token/word	Token ID
National	31912
flags	8202
are	527
symbolic	36396
representation	44713
of	315
countries	5691
, (comma)	11
with	449
distinct	12742
colours	2730
and	323
shapes	93159
. (full stop)	13

AI, ML, DL, ... ?



AI, ML, DL, DATA SCIENCE, ... ?



STRUCTURED



Excel Dordje Jančić HWM > Diplo IGF transcripts searchable database - Actors - Saved

File Home Insert Data Review View Help Tell me what you want to do Open in Desktop App

Undo Redo

1	YEAR	DONE	NAME	COUNTRY/REGION	ORGANIZATION NAME	ORGANIZATION TY	GENDE
2	2006	Y	Ms. Desiree Miloshevic	United States	AFILIAS	Other Entities	Female
3	2006	Y	Mr. Mathieu Weill	France	AFNIC	Other Entities	Male
4	2006	Y	Mr. Pape Douf	Senegal	Africa Civil Society for IT	Other Entities	Male
5	2006	Y	Ms. Christine Butegwa	Kenya	African Women's Develo	Other Entities	Female
6	2006	Y	Mr. Raymond Pitak	United States	American Registry for In	Other Entities	Male
7	2006	Y	Mr. Marcelo Valle Fonrouge	Argentina	Argentina	Government Delegatic	Male
8	2006	Y	Mr. Jonathan Zuck	United States	Association for Compete	Other Entities	Male
9	2006	Y	Ms. Karen Banks	South Africa	Association For Progress	Other Entities	Female
10	2006	Y	Mr. Philip Mason	Australia	Australia	Government Delegatic	Male
11	2006	Y	Mr. William Scott	Australia	Australia	Government Delegatic	Male
12	2006	Y	Mr. Christian Singer	Austria	Austria	Government Delegatic	Male
13	2006	Y	Mr. Knut Rakus	Austria	Austria	Government Delegatic	Male
14	2006	Y	Ms. Barbara Krippel	Austria	Austria	Government Delegatic	Female
15	2006	Y	Ms. Elisabeth Marschang	Austria	Austria	Government Delegatic	Female
16	2006	Y	Mr. Rahman AHM Bachur	Bangladesh	Bangladesh NGOs Netw	Other Entities	Male
17	2006	Y	Mr. C. Trevor Clarke	Barbados	Barbados	Government Delegatic	Male

Sheet1



UNSTRUCTURED

BBC NEWS 11 June 2012 Last updated at 13:56

Home World UK England N. Ireland Scotland Wales Business Politics Health Education Sci/Environment Technology Entertainment & Arts

Video & Audio Magazines Editors' Blog In Pictures Also in the News Have Your Say Special Reports

LATEST: British tourist dies in Greek parachuting accident

Ex-PM Brown attacks Sun conduct

Gordon Brown says lessons cannot be learned about press standards until there is honesty about how the Sun covered his son's cystic fibrosis.

Like Gordon Brown at Leveson **Like** Brown on Sun and son's health

Nick Robinson: Power and the press **Q&A:** The Leveson Inquiry

Warnings of heavy rain and floods

Severe weather warnings of heavy rain, and flood alerts, are in place across parts of England, following a weekend that saw flood rescues in Wales.

Flood clean-up is continuing **Flood and rain alerts for England** **Pregnant woman rescued from river**

Live: Brown at Leveson

1401: Mr Osborne is also likely to face questions over his communications with Jeremy Hunt on the day the culture secretary was handed responsibility for the BSkyB bid.

Mr Hunt had sent a text to Mr Osborne expressing fears the government would "screw up" over its handling of the BSkyB bid after Business Secretary Vince Cable was recorded saying he had "declared war" on Rupert Murdoch.

Mr Osborne texted to Mr Hunt: "I hope you like the solution," shortly before he was given responsibility for dealing with the bid.

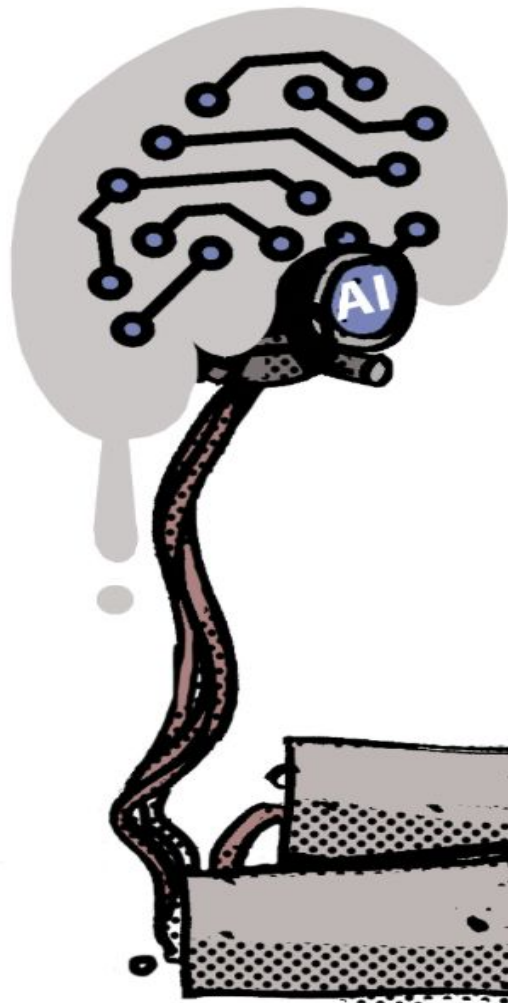
1309: Chancellor George Osborne will be giving evidence to the Leveson inquiry shortly. **Go to Live Event Page**

Nadal clinches record French Open

Spain's Rafael Nadal wins a record seventh French Open as he closes out a 6-4 6-3 2-6 7-5 victory over world number one Novak Djokovic. **Nadal v Djokovic BBC SPORT**

French Open: final halted by rain **BBC SPORT**

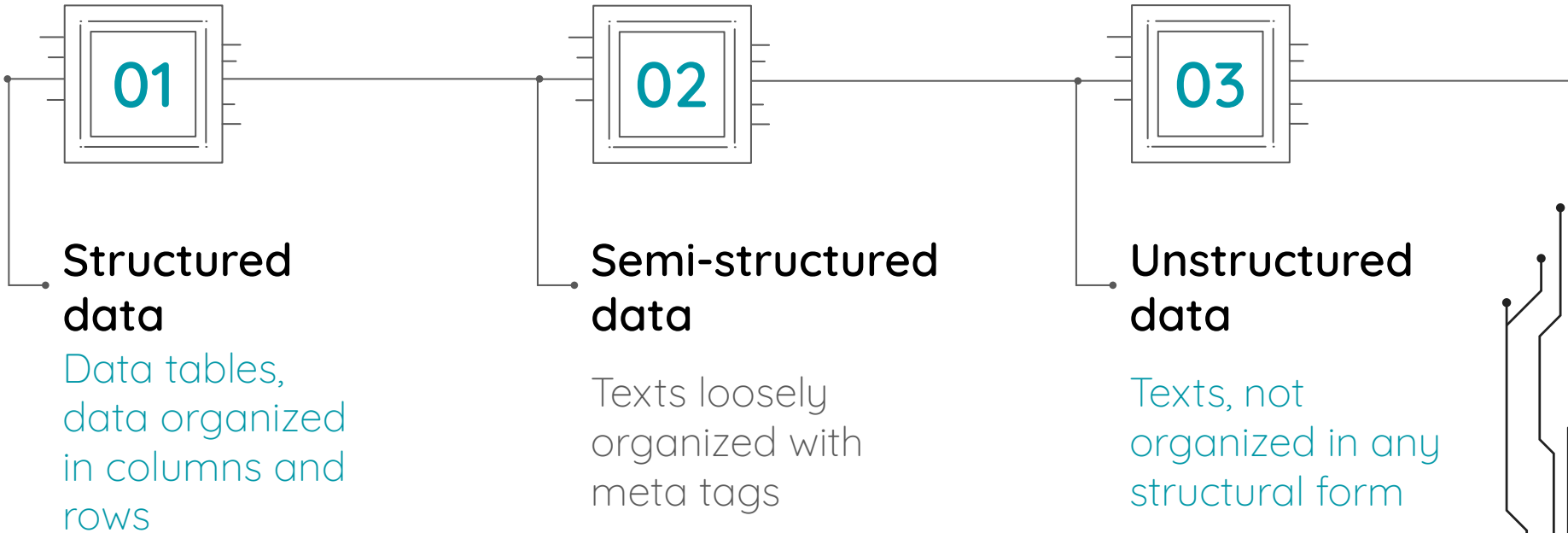
Watch/ Listen



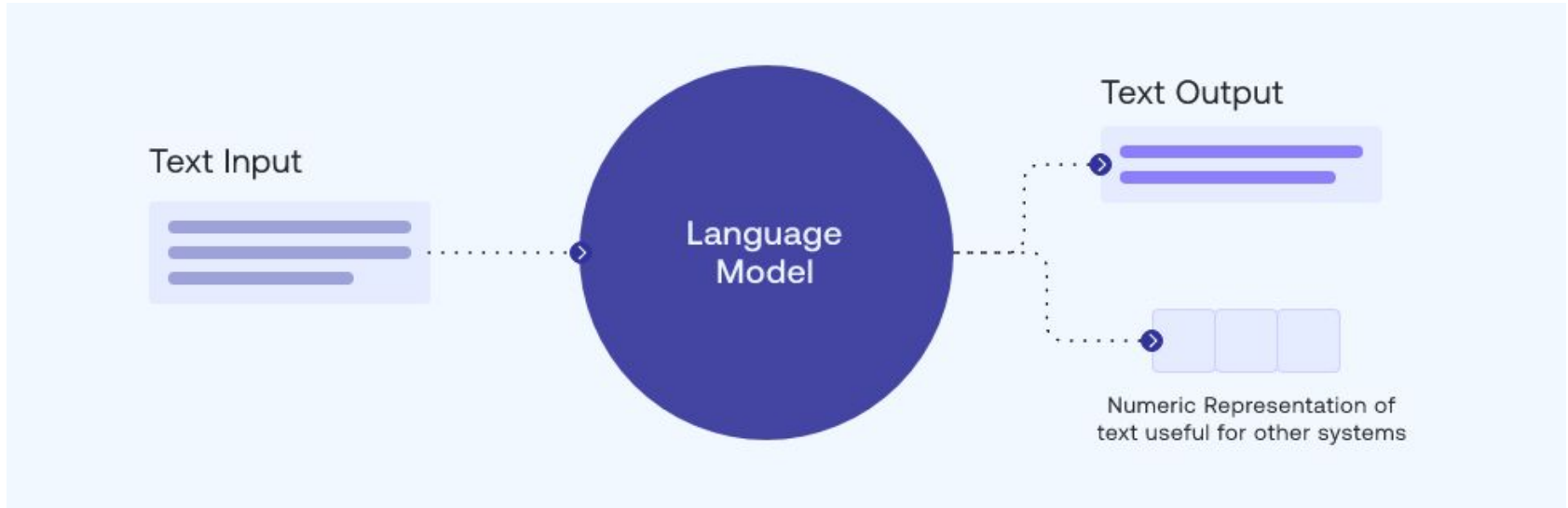
*I think,
therefore I am.*

*I am
because
you are.*

TYPES OF DATA



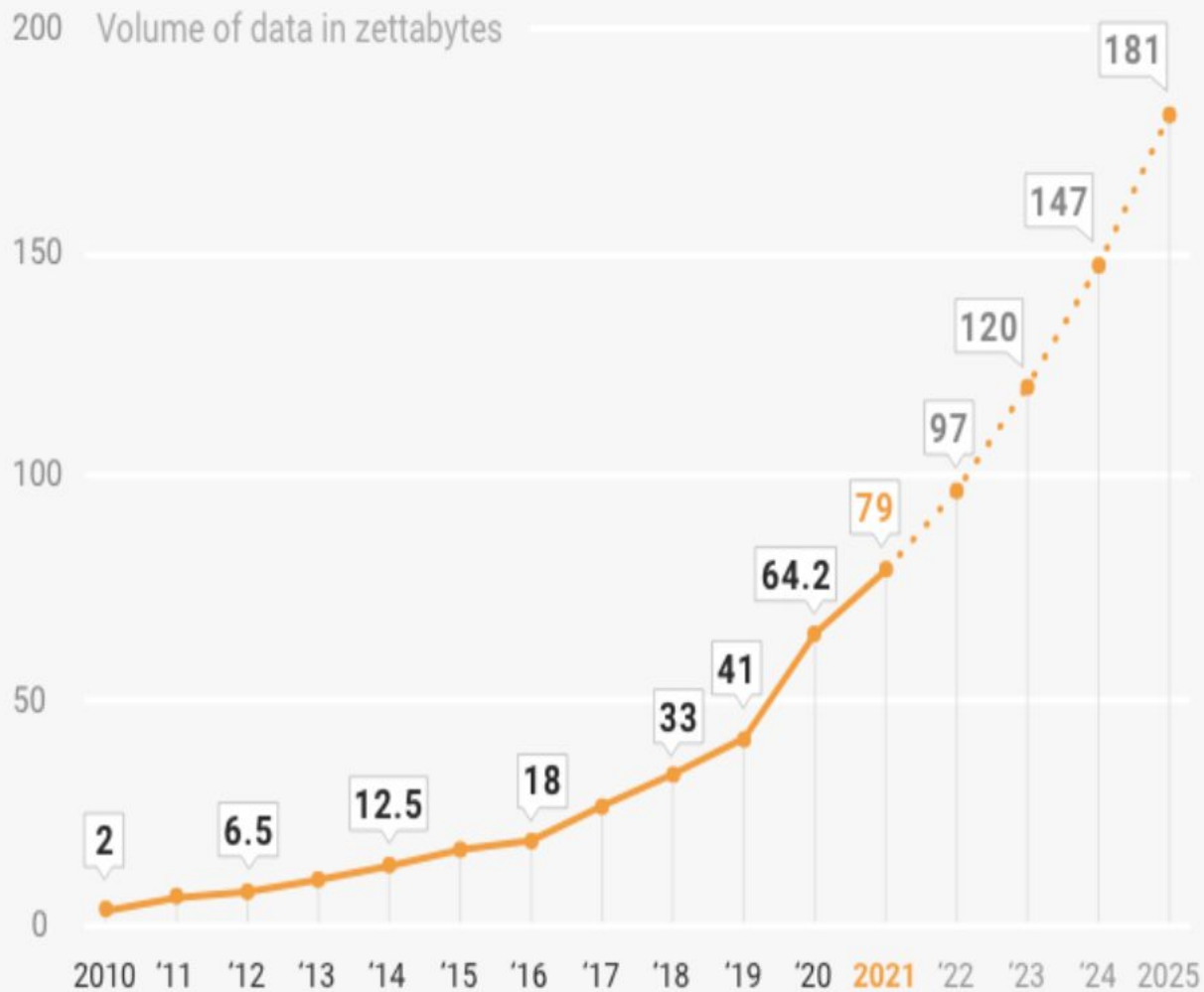
Large Language Models



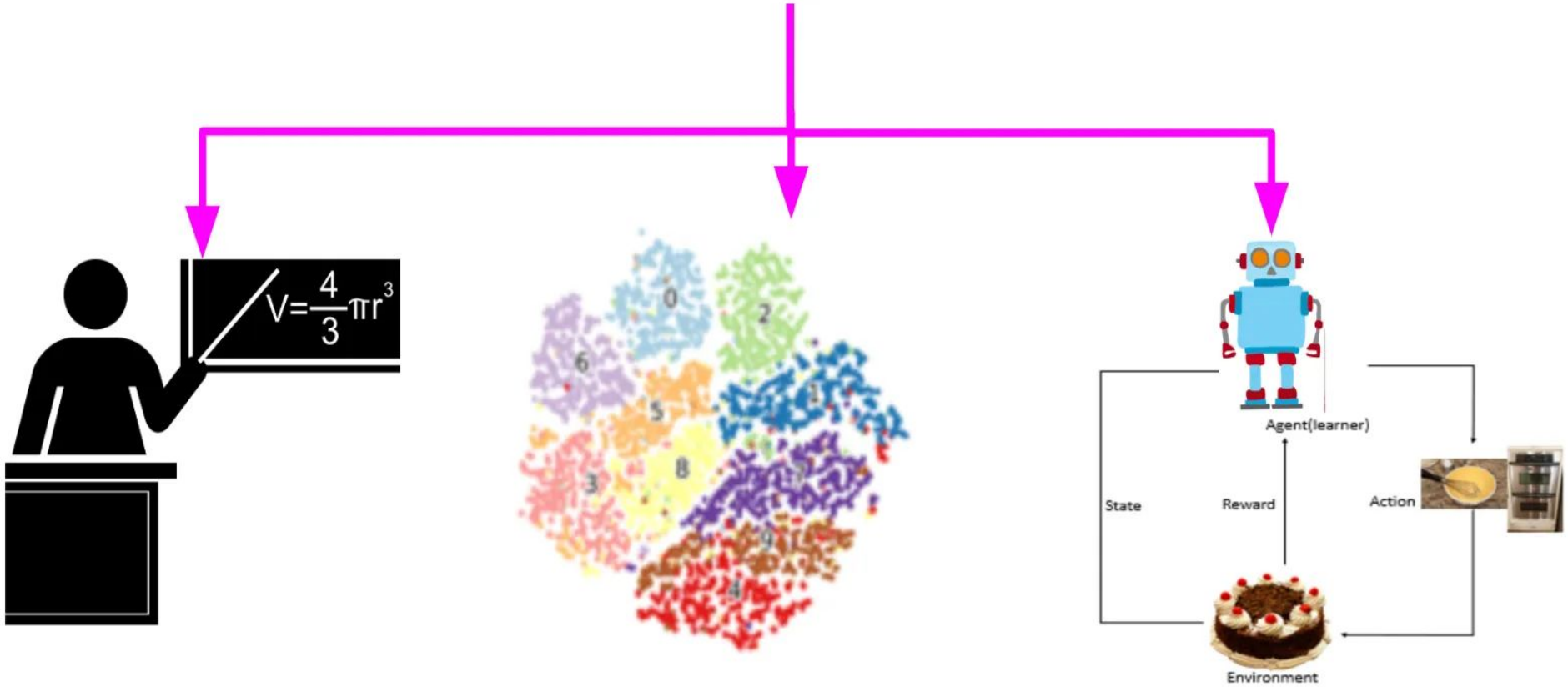
Most Common NLP tasks

- 1. Classifying whole sentences**
- 2. Classifying each word in a sentence**
- 3. Generating text content**
- 4. Extracting an answer from a text**
- 5. Generating a new sentence from an input text**

Data today



Machine Learning



Supervised Learning

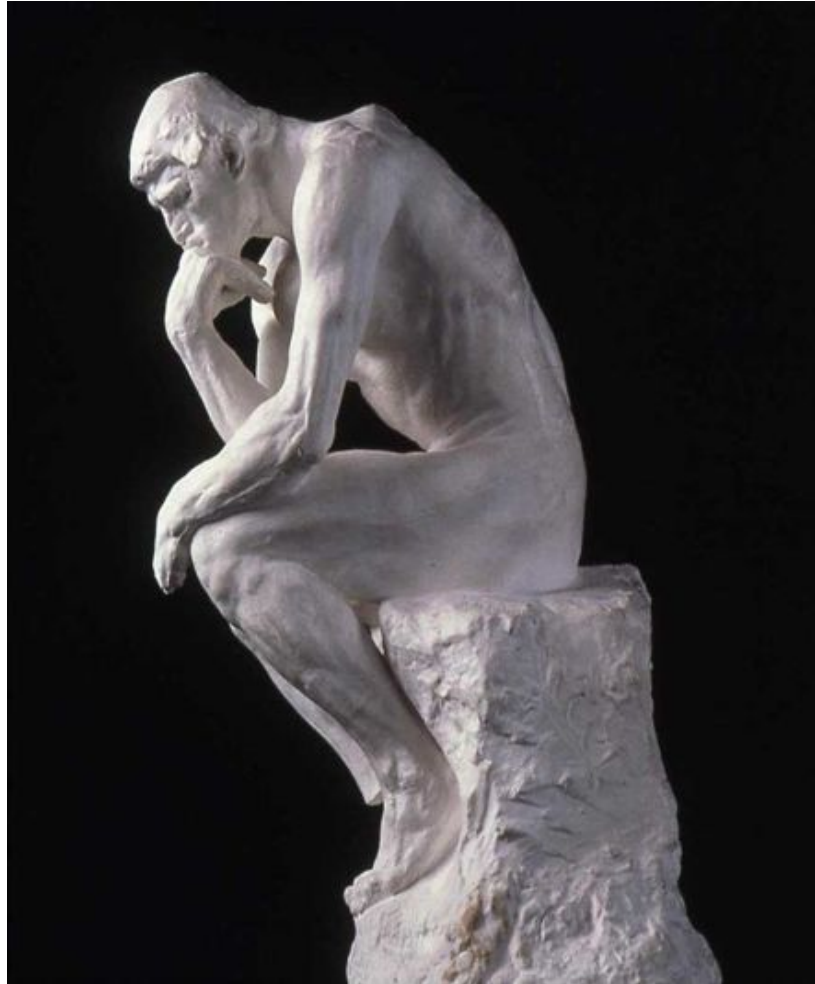
Unsupervised Learning

Reinforcement Learning

PHILOSOPHY

Philosophy

How to rethink society
and humanity?

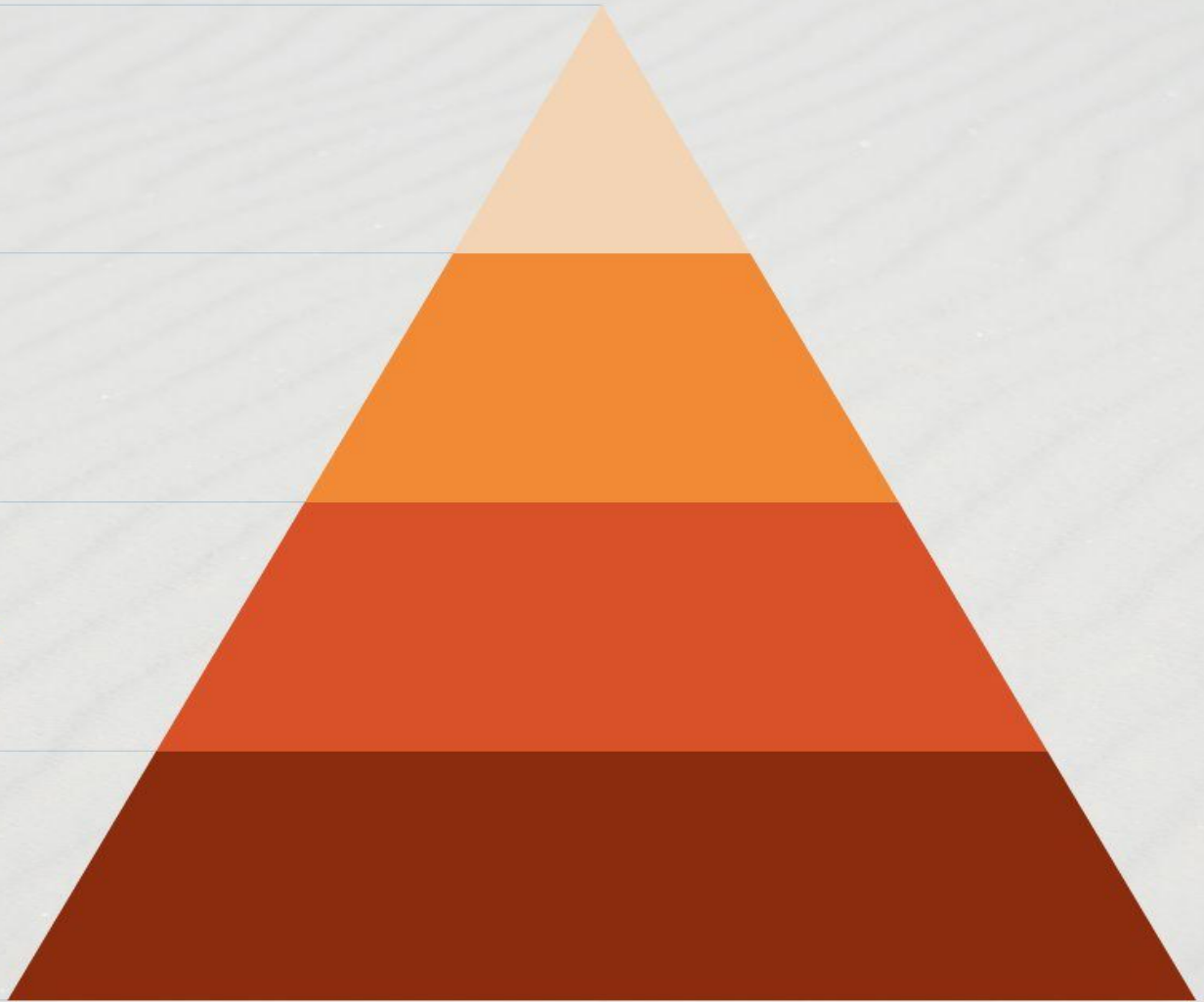


Digital 'Axial Period' (our era)

Vienna thinkers (early 20th century)

Enlightenment period (17-18 century)

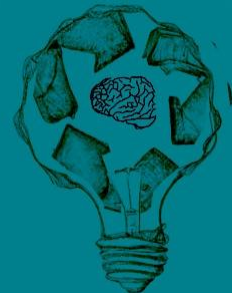
Axial period (800 BC - AD)





RECYCLING IDEAS

Old knowledge for a New AI Era



Summer 2023
edition



CONFUCIUS



LAO-TZE



KAUTILYA



SOCRATES



PLATO



IBN-KHALDUN



MACHIAVELLI



VOLTAIRE



ARISTOTLE



SPINOZA



THOMAS HOBBS
There are three causes of strife in human nature: rivalry, distrust, pride.



DAVID HUME
The corruption of the best things gives rise to the worst. Custom is the great guide of human life.



JOHN LOCKE
For no government can have a right to obedience from a people who have not freely consented to it.



HUGO GROTIUS
Every nation is free to travel to every other nation, and to trade with it.

GOVERNMENT

ACADEMIA

TECHNICAL COMMUNITY

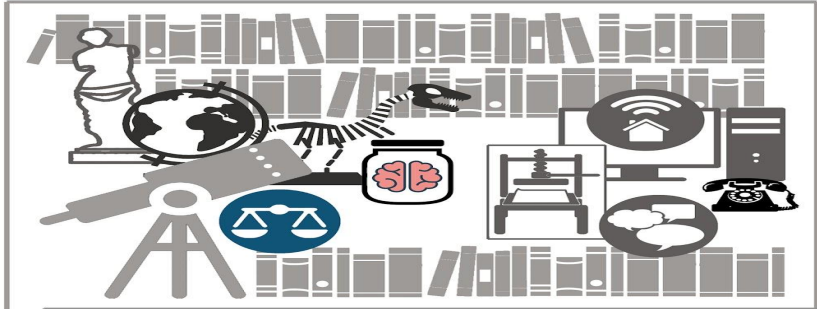
CIVIL SOCIETY

INTERNATIONAL ORGANISATIONS

BUSINESS



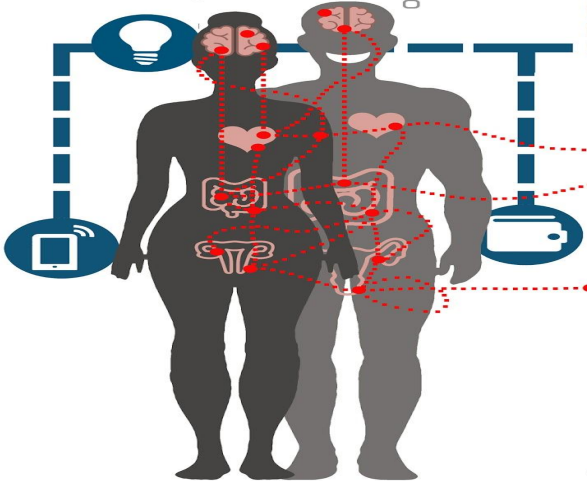
DIGITAL SOCIAL CONTRACT



DIGNITY
PERSONAL CHOICES
PARTNERS / FRIENDS

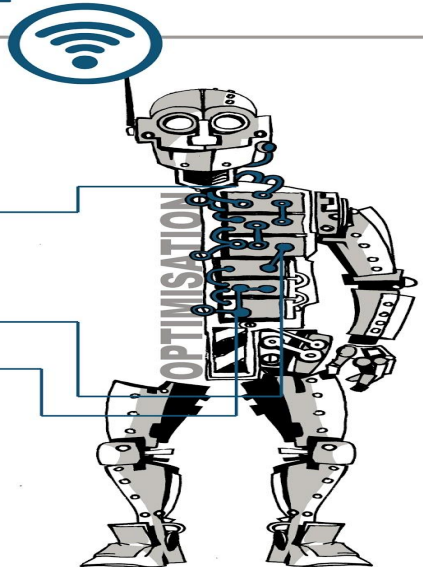
MARKET
CONSUMER CHOICES

DEMOCRACY
POLITICAL CHOICES



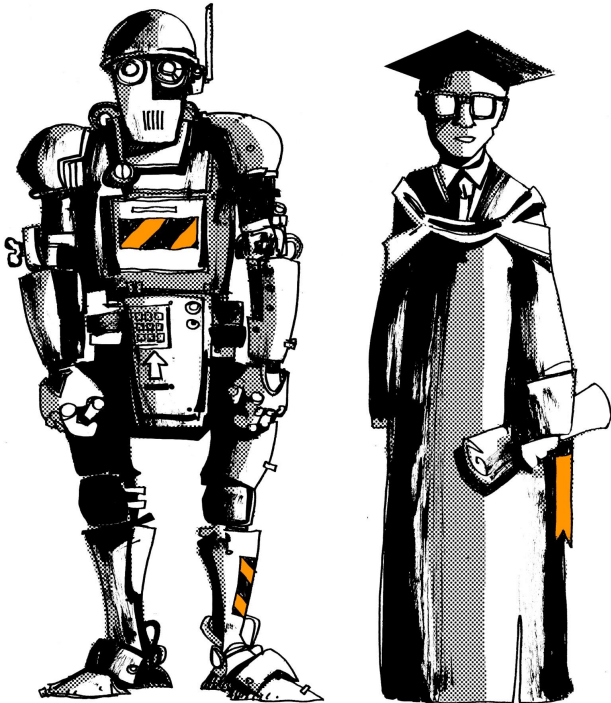
HUMAN CHOICES

A. B. C.
A. B. C.
A. B. C.
A. B. C.



MACHINE CHOICES

A right to be humanly imperfect?



Preserving and protecting the right to be humanly imperfect even when it is not economically optimal and efficient.

- Right to remain 'natural'
- Right to disconnect
- Right to be anonymous
- Right to be employed over machines
- ...

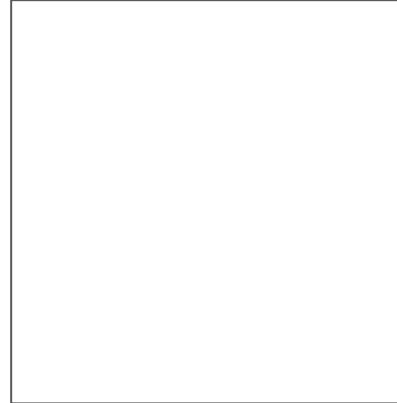
In Search for New TURING TEST



Flea
market



Jokes &
Humor



Diplomatic
Language

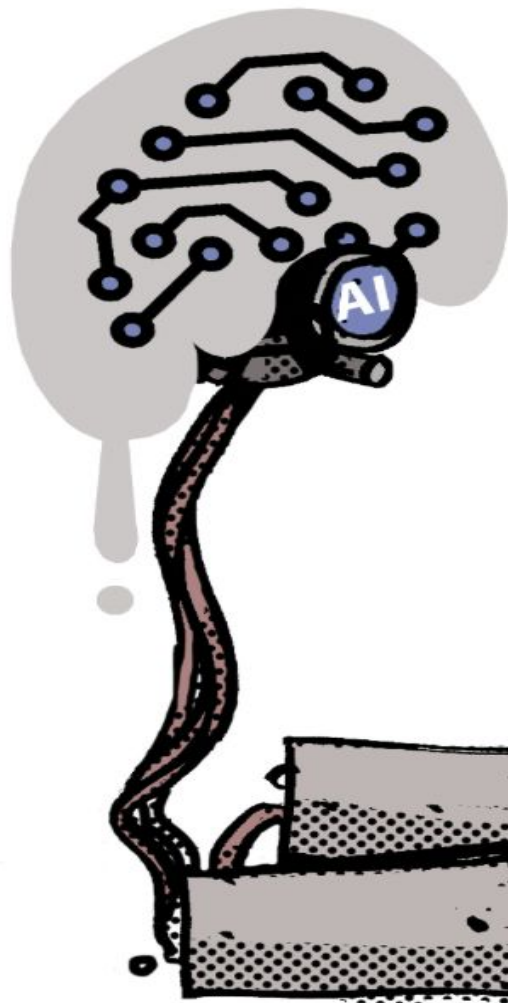


Yes Minister,
Sir Humphry

A landscape of layered mountains at sunset or sunrise, with a hiker visible on a ridge in the foreground.

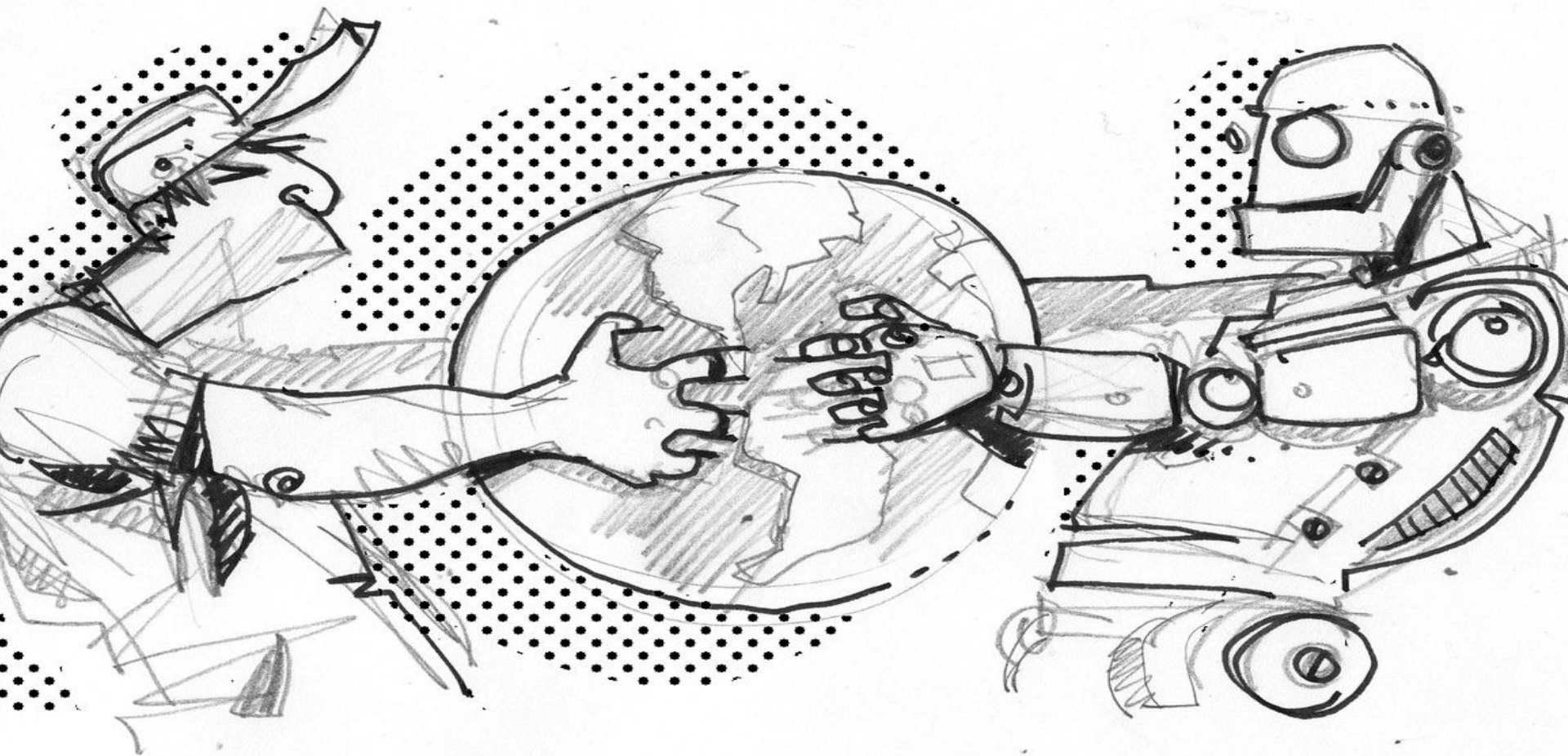
Longtermism

**the most
important trend**



*I think,
therefore I am.*

*I am
because
you are.*



GOVERNANCE

Digital governance directory



ZZZ.

Let's try with this one.



Fake news and Elections

Protect data and privacy

Ethics & guard-rails for AI

Regulate Digital Currencies

Please hold on, we are transferring your call to the required extension

Parliament

Citizen

Government

Business

AI Governance Pyramid

Issues

Actors

Consumer protection | Competition regulation |
E-commerce | Antitrust regulation

Digital industry from major tech platforms to small/medium enterprises | Governments | International organisations | Civil society | Tech community | Consumer organisations

Technical standards | Compliance |
Open source models

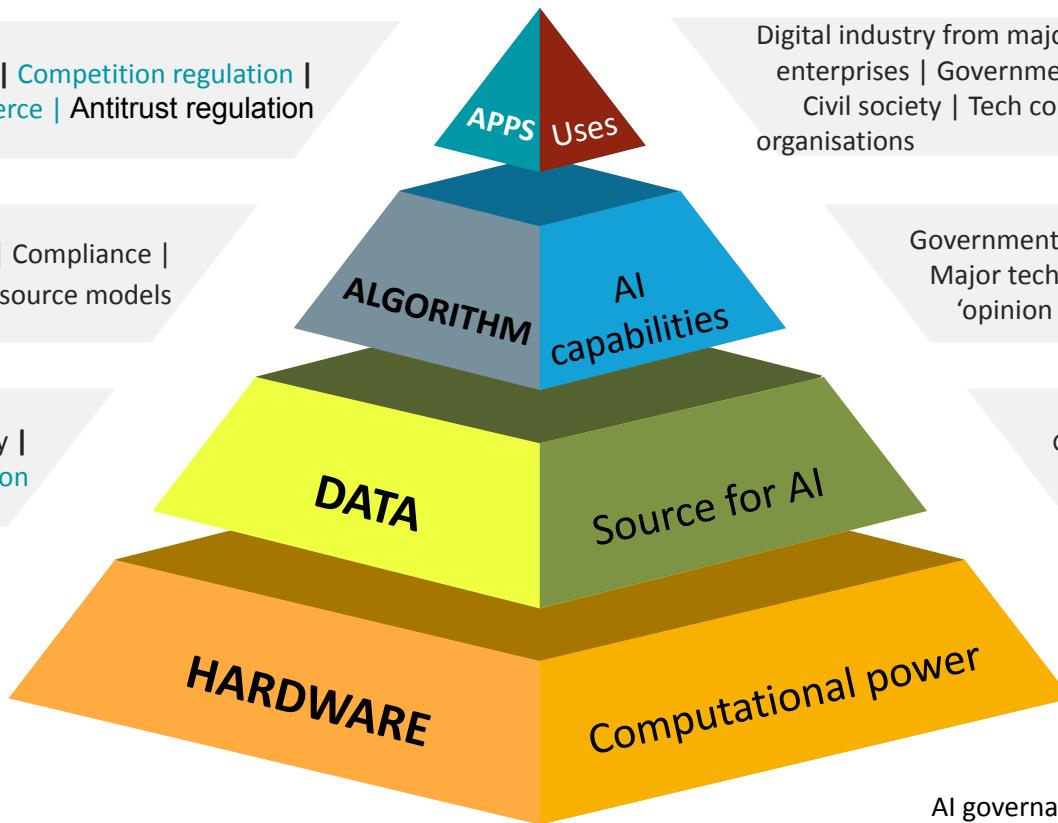
Governments | International organisations | Major tech companies | Civil society | New 'opinion shapers' and media

Data protection and privacy |
Business data regulation

Governments | International organisations | Industry | Academia

Standardisation | Trade regulations | Export control & sanctions

Microchips companies (TCMA,); Cloud operators; | Standardisation bodies | Governments



AI governance methodology by Jovan Kurbalija

Clarity in AI governance - Diplo's Approach

Regulating
microprocessors

Hardware
Computational Power



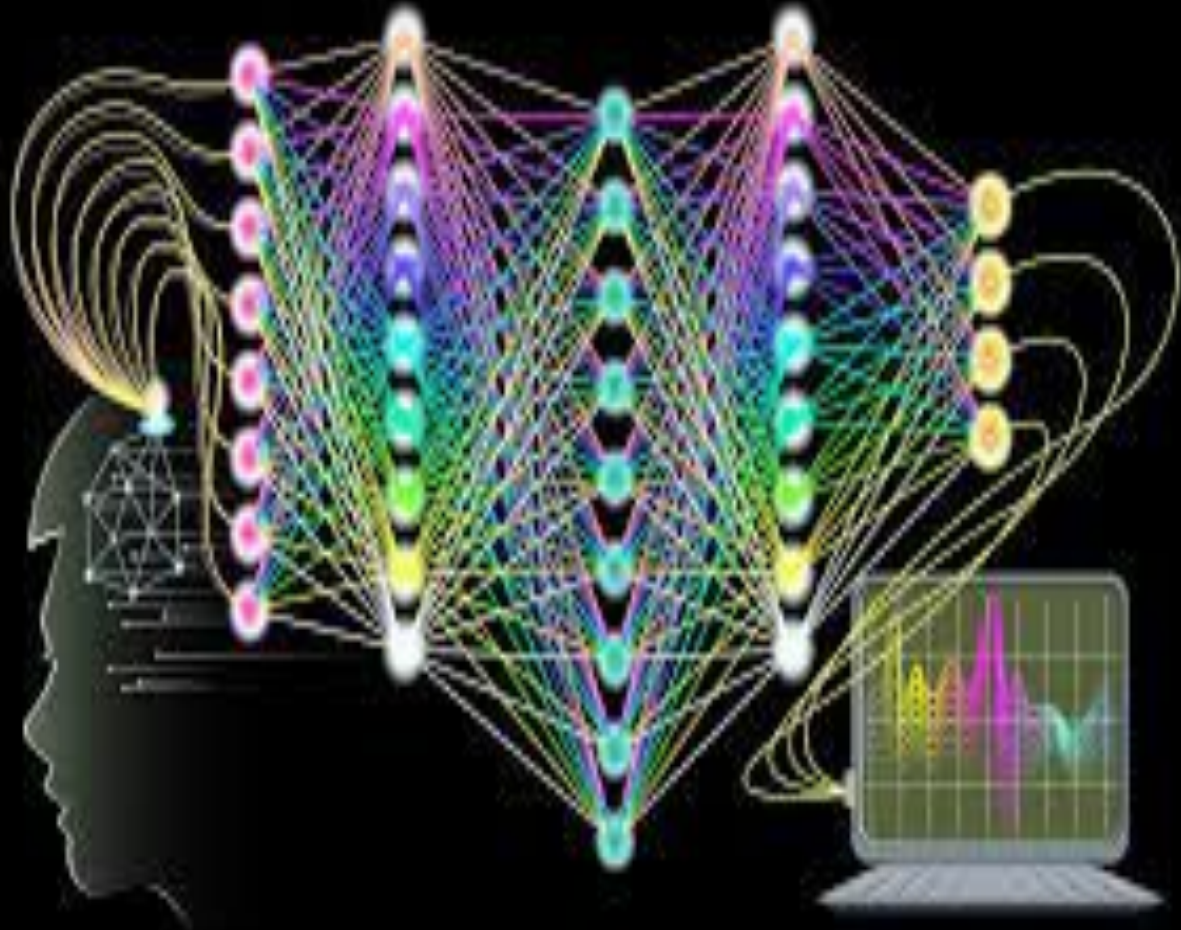
Regulating data inputs into AI

Data Source of AI

- New York Times vs. OpenAI (Dec 2023)
- Doe vs. GitHub (Nov 2023)
- Authors Guild (incl. John Grisham & George R.R. Martin) et al. vs. OpenAI (Sep 2023)
- Sarah Silverman, Christopher Golden & Richard Kadrey vs. OpenAI (Jul 2023)
- Sarah Silverman, Christopher Golden & Richard Kadrey vs. Meta (Jul 2023)
- Getty Images vs. Stability AI (Jan 2023)
- Sarah Andersen, Kelly McKernan & Karla Ortiz vs. Stability AI (Jan 2023)

Regulating
algorithms

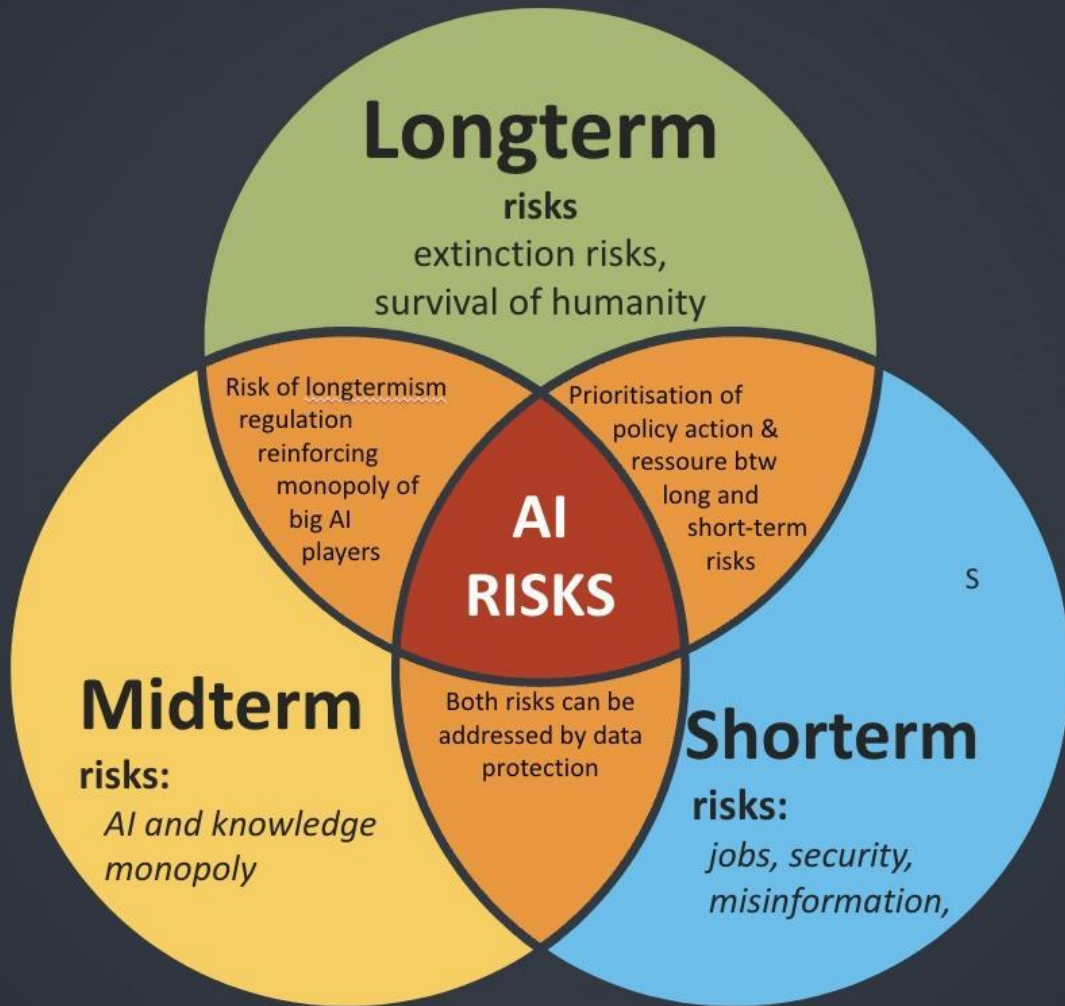
Algorithms
AI Capabilities



Regulating practical uses of AI

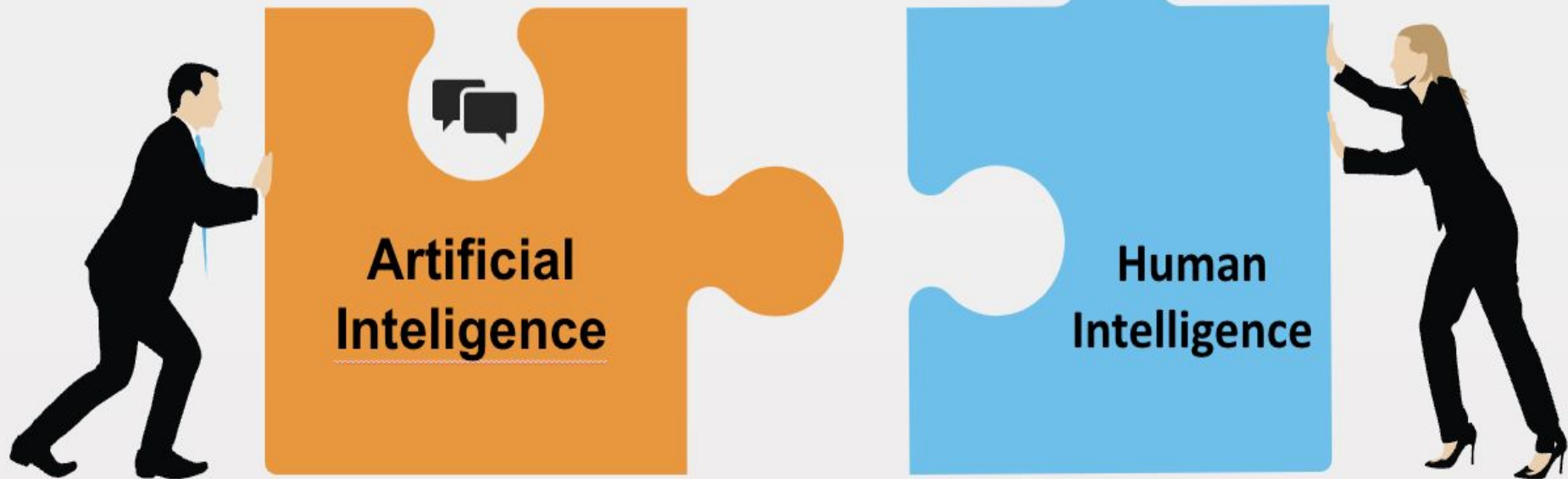
Apps & Uses

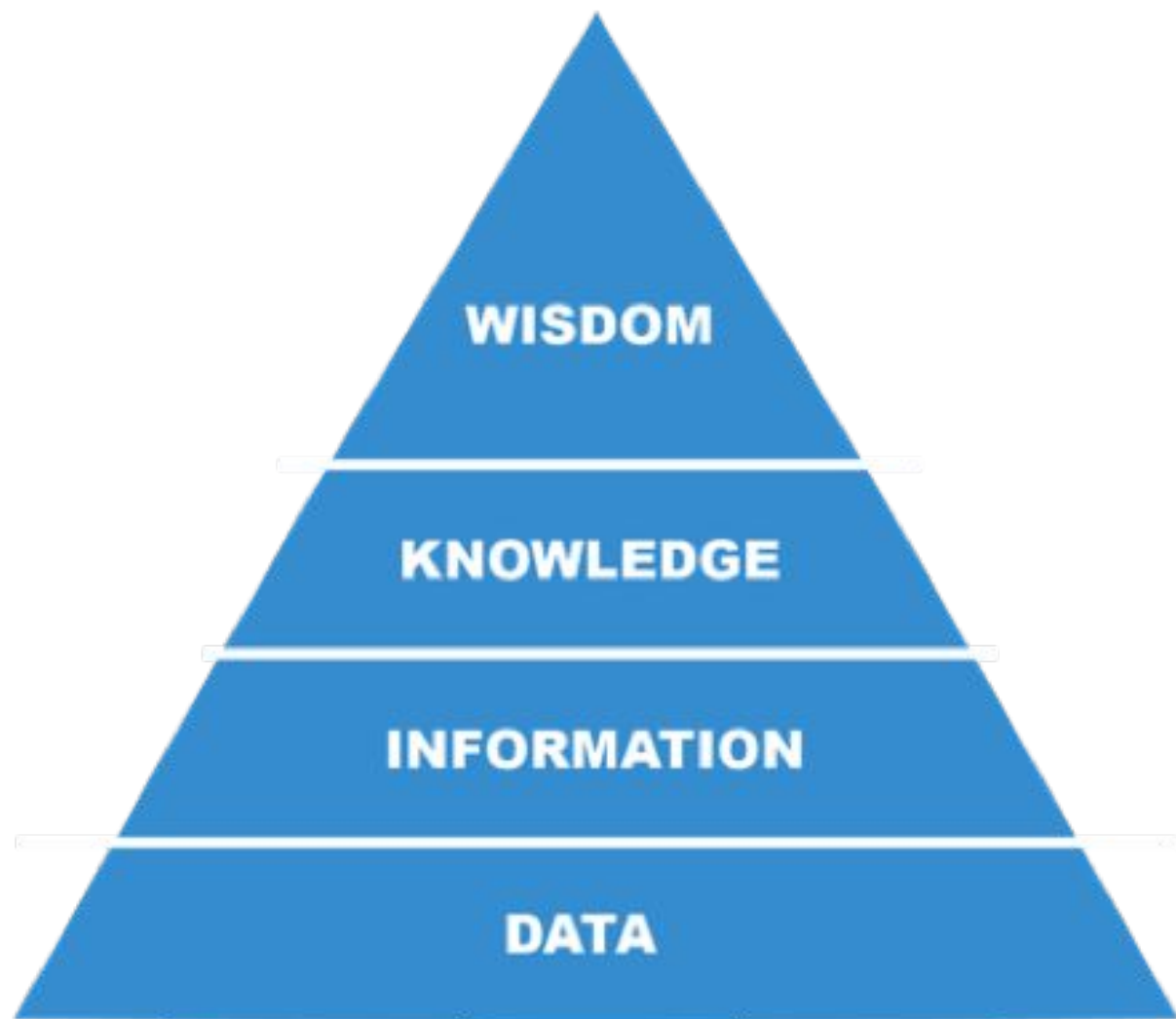




ORGANISATION & BUSINESS

Nexus of Cognitive Proximity



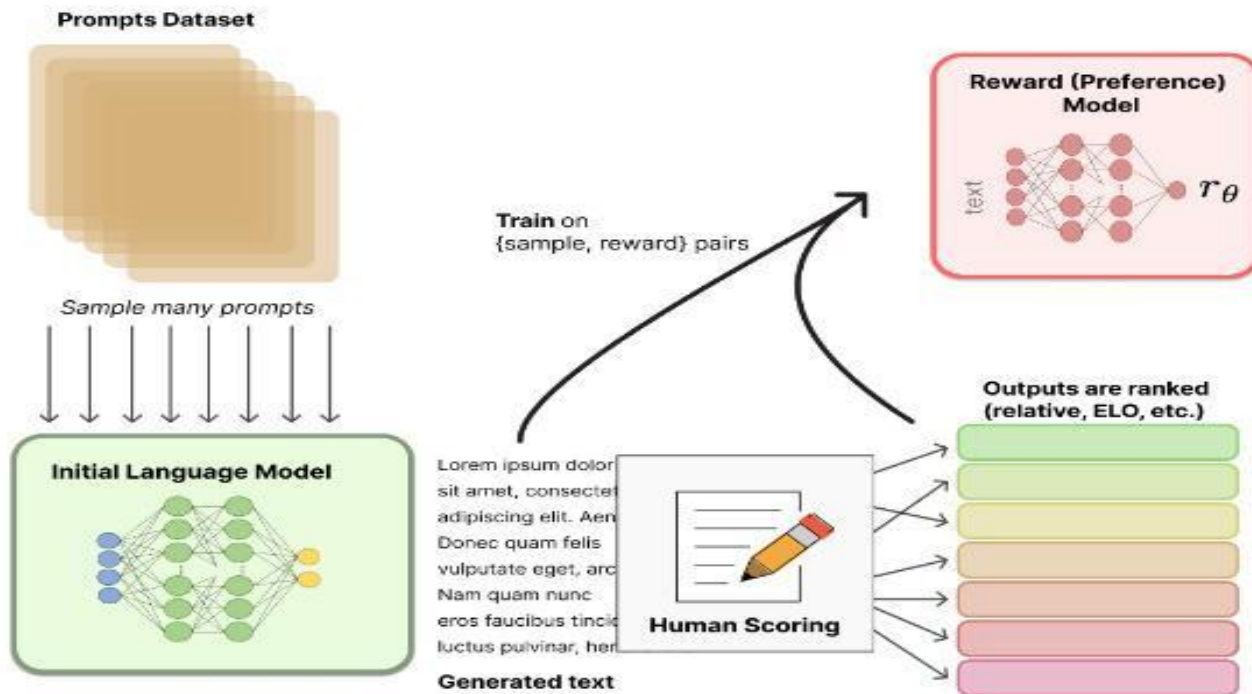


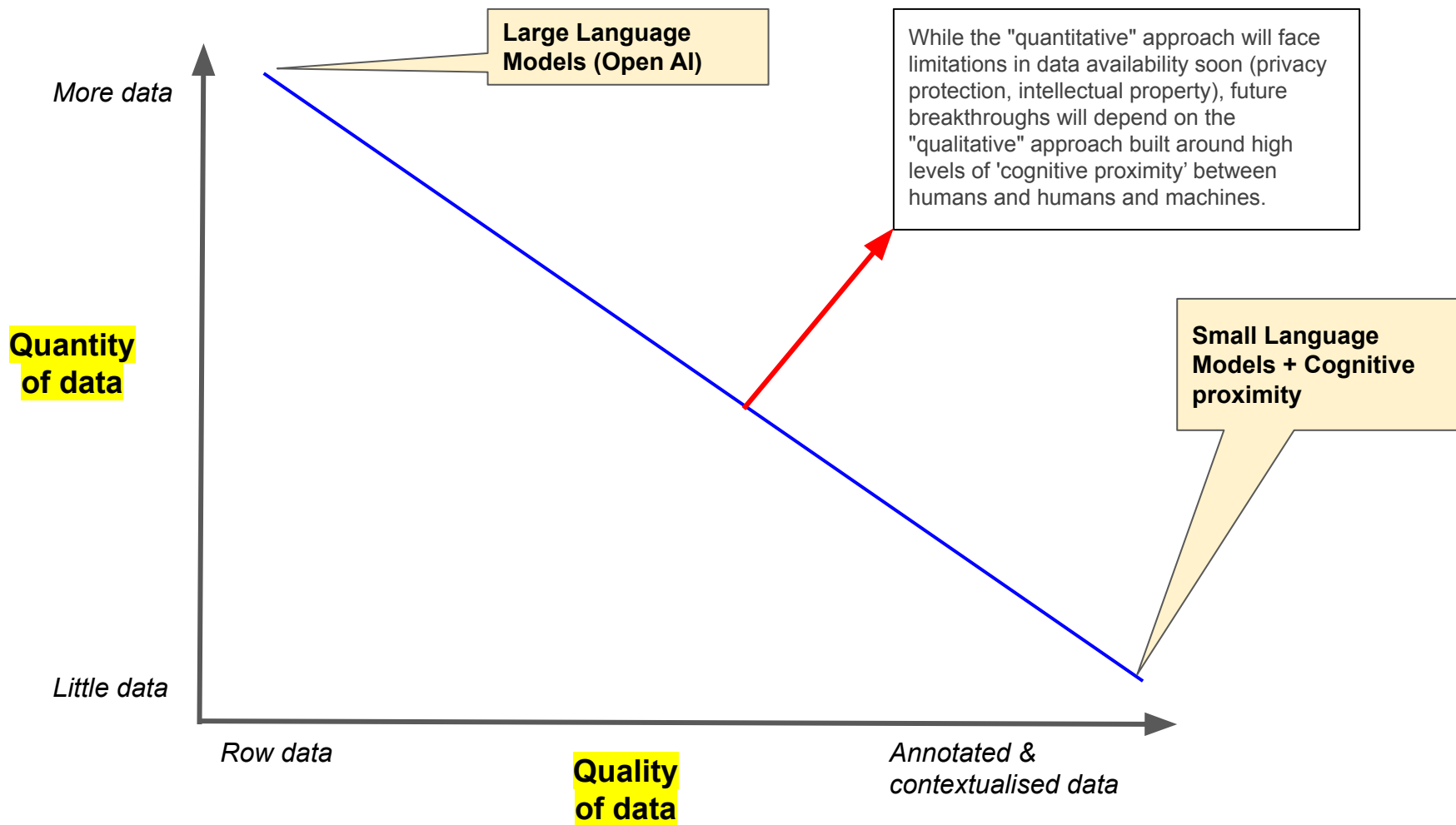
Cognitive proximity

Diplo: How to integrate AI into business and organisation

		Close			Level of cognitive proximity among humans						Distant	
		1	2	3	4	5	6	7	8	9	10	
Close		ROBINSON CORNER: individual with time for introspection and rudimentary tools for dealing with nature Typically exists with spouses, parents, and closest relatives.	Intimate interpersonal understanding based on personal, emotional, and spiritual bonding.	Deep interpersonal understanding without need to explain context and motivation. Typically exists with closest relatives.	Close inter-personal relations with anticipation of reactions and thoughts.	Inter-personal relations based on shared cultural and communal context (e.g. archetypes, narratives, beliefs)	Professional relations WITH 'shared chemistry' - same or similar cultural space (archetypes, framing problems/solutions) Start-ups build around non-hierarchical structure and permissionless organisation.	Professional relations WITHOUT 'shared chemistry' of similar cultural space but highly agile organisation Start-ups build around non-hierarchical structure and permissionless organisation.	Professional relations in reduced organisational hierarchy (most of Start-ups).	Highly functional hierarchies that leaves space for individual initiatives.	Traditional formal hierarchies (delivery on purpose)	Disfunctional formal hierarchies (no shared purpose, institutional turf battles)
	1	Use of writing and other basic 'technologies' for human interaction (meetings)			DIPLO: Anticipating next steps, potential risks, and opportunities (e.g. preparing PPT during the session in order to reflect discussion; dealing with 'small things' like access to buildings, etc.).	DIPLO: Preparing cultural artefacts (comics & games) that rely on shared cultural context mainly in Belgrade 'comics culture'.	DIPLO: internal culture and atmosphere are often observed from outside as 'feel good' at Diplo's events and activities.					
	2	Managing texts digitally (using office tools: word processors, excel)					DIPLO: Standard use of office digital tools					
	3	Use of web for communication					DIPLO: Staff can edit and contribute directly to Diplo's websites					
	4	Use of social media for information gathering and communication					DIPLO: Standard use of social media					
	5	Use of Zoom and other online meeting platforms					DIPLO: Online meeting platforms are fully and functionally integrated in Diplo's working activities for a few decades					
	6	Operational use of structured data (databases, data-mining, quantitative data)					DIPLO: Development and use of taxonomies by experts and tech team for digital governance, diplomacy, and other content areas.					
	7	Passive' AI through knowledge graphs and pattern-recognition in organisational work.				DIPLO: Pattern recognition in course, web, and research activities; development of knowledge graphs.						
	8	Active' AI through integration of reinforced learning in brainstorming, research, and teaching activities.				DIPLO: Integration of AI learning in regular activities via hypertext, group readings, and other techniques for reinforced learning.						
	Distant	9	Tech-enhanced cognitive skills (smart implants in human body)	Beyond human control with major risks for humanity (to be avoided)								
10		Trans Humanism: a seamless mix of human and artificial intelligence	Beyond human control with major risks for humanity (to be avoided)									
											ORWELIAN CORNER: Use of AI for totalitarian control of disfunctional institutions and disintegrated society	

Reinforcement Learning with Human Feedback





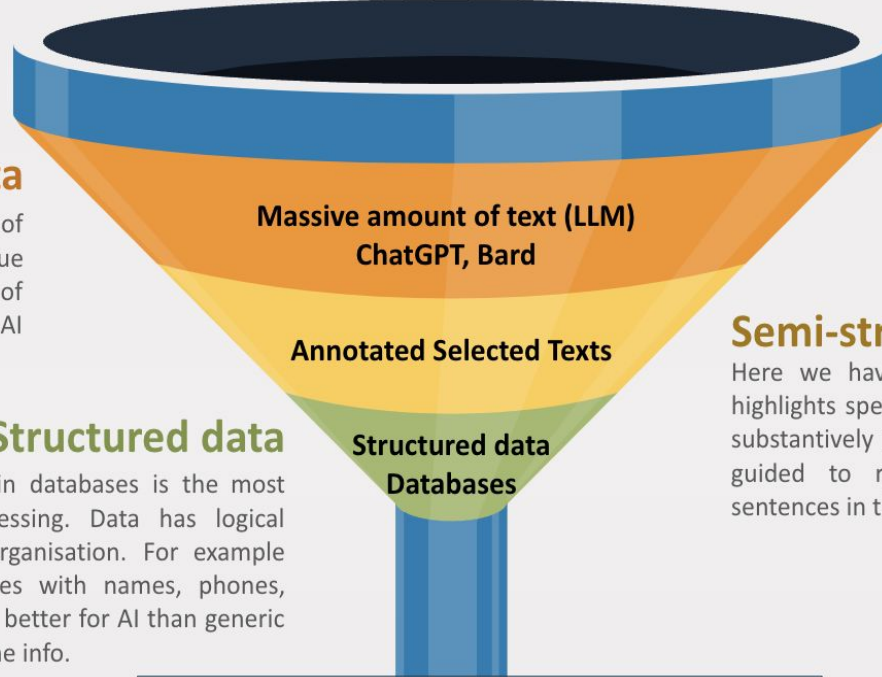
AI Processing Funnel

Non-structured data

A lot of free-text can generate text of generic meaning. The less specific issue is, the more useful text is. Quality of outputs can be improved with AI prompting.

Structured data

Data organised in databases is the most useful for processing. Data has logical structure and organisation. For example address databases with names, phones, and addresses is better for AI than generic text with the same info.



Semi-structured data

Here we have annotated text, which highlights specific parts and phrases. AI substantively increases quality by being guided to relevant paragraphs and sentences in the source text.



AI Interface which we use to communicate with AI systems such as ChatGPT

Diplo Tools

Wide range of AI and data tools



Data sandbox →

Embark on a data exploration journey with GPT's assistance! Uncover a vast collection of thousands of datasets and effortlessly preview them. Compare data values across countries, rank them according to your needs, and swiftly download them.



Digital footprint →

Introducing the Geneva Digital Footprint app! Discover your online presence across 344 policy, governance, and diplomatic topics. Analysing data from 50 cities worldwide, it estimates Geneva's relevance in Google searches. Gain valuable insights without any pressure. Take control of your digital footprint today!



Speech generator →

Introducing an innovative tool for diplomats and practitioners: Diplo's AI-powered cybersecurity speech writing tool. Combining advanced algorithms and Diplo's cybersecurity expertise, this tool is designed to assist in crafting impactful speeches on cybersecurity. Leverage the power of AI and expert knowledge to enhance your communication on this critical topic.



Compare countries & companies →

Discover a powerful tool that allows you to compare the annual GDPs of countries and groups of countries' annual gross revenues of tech companies. Gain valuable insights into the economic landscape and understand the scale and significance of tech industry contributions. Unlock a new perspective on global economies with this intuitive comparison tool.



Reporting A(I)ssistant →

Experience the convenience and excitement of our user-friendly app for meeting and conference summarisation. Effortlessly transcribed audio recordings, captured vital points, and categorised names and entities. Stay organised and easily search for specific information, making report writing a breeze. Upgrade your summarisation process today and embrace the thrill of efficiency.



Colours of flags →

Discover the fascinating connection between flags and artificial intelligence (AI): patterns. Look at flags and observe the recurring colors, shapes, and symbols that form distinct patterns. Just like AI recognizes patterns in data, flags exhibit recognizable patterns that reflect cultural identities. Explore the captivating world of flags and patterns, uncovering the rich symbolism behind them.

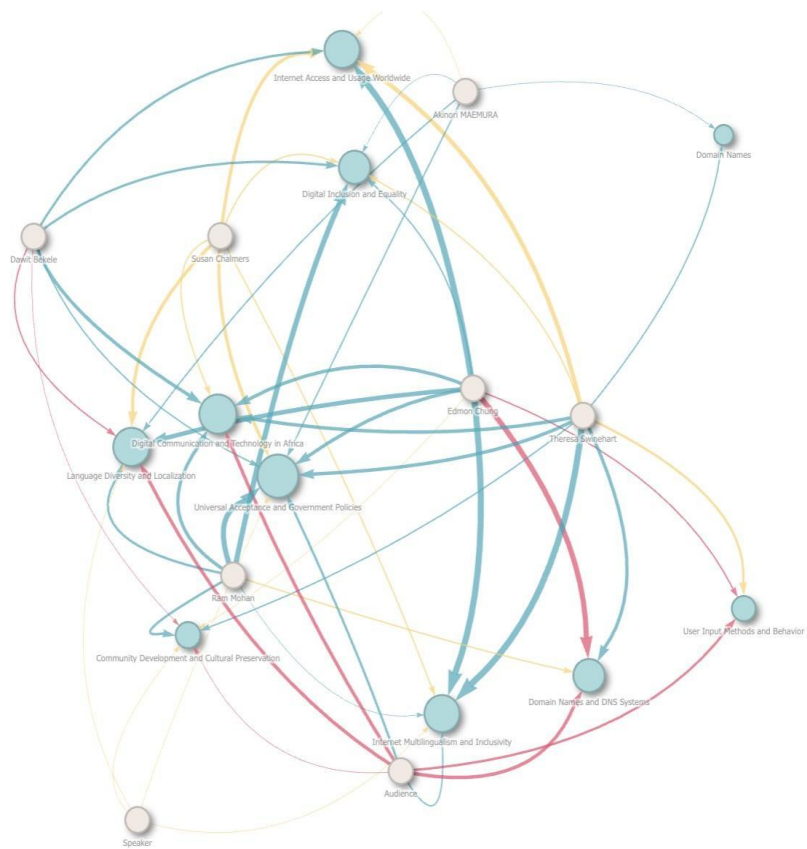
**Just-in-time reporting by DiploGPT from the UN Security
Council session:
Futureproofing trust for sustaining peace
3 May 2023**



IGF Knowledge Graphs



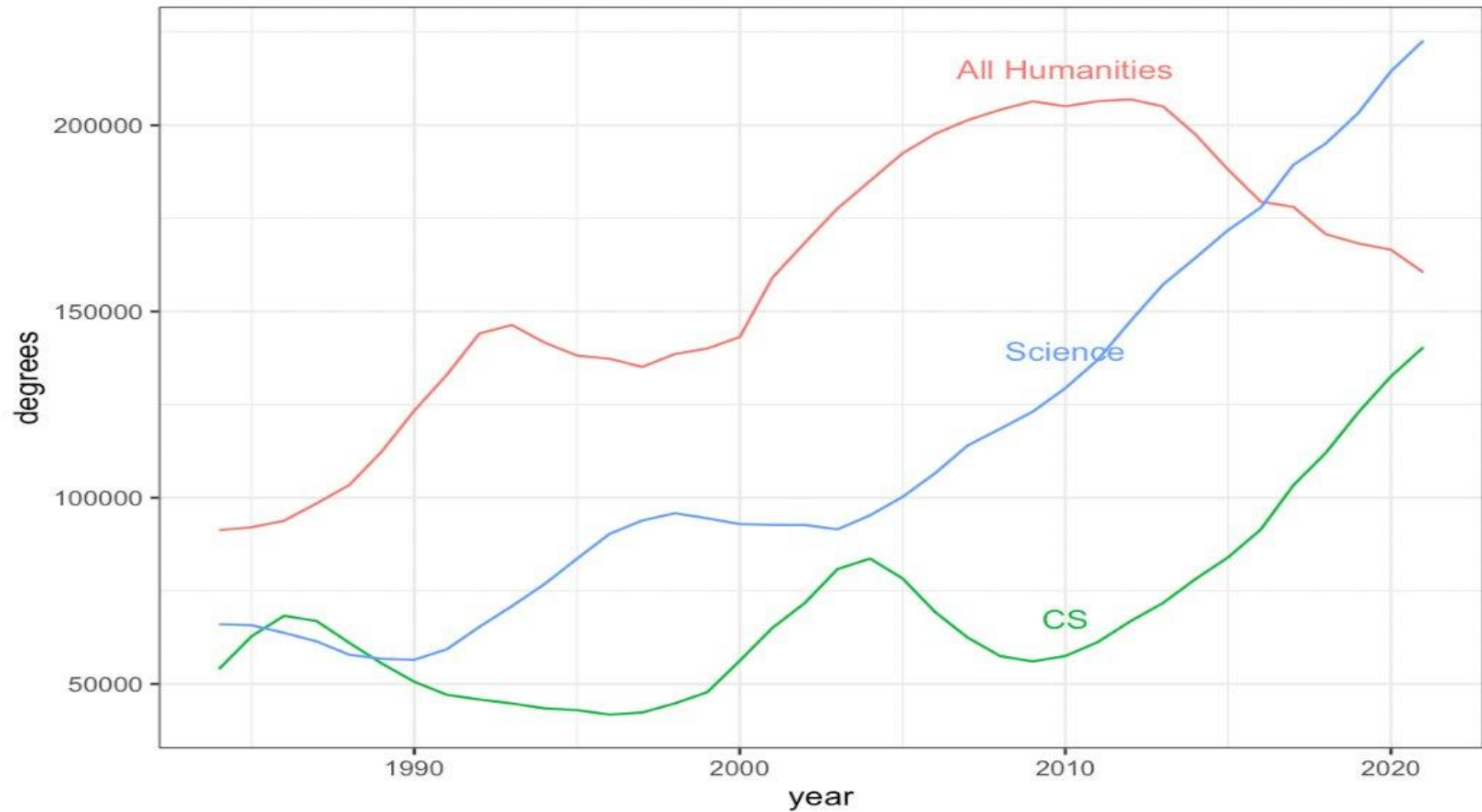
Knowledge graph of one day at IGF 2023



Knowledge graph from one session

INDIVIDUALS

CS on the verge of surpassing all humanities degrees



REAL-LIFE AI EXAMPLES

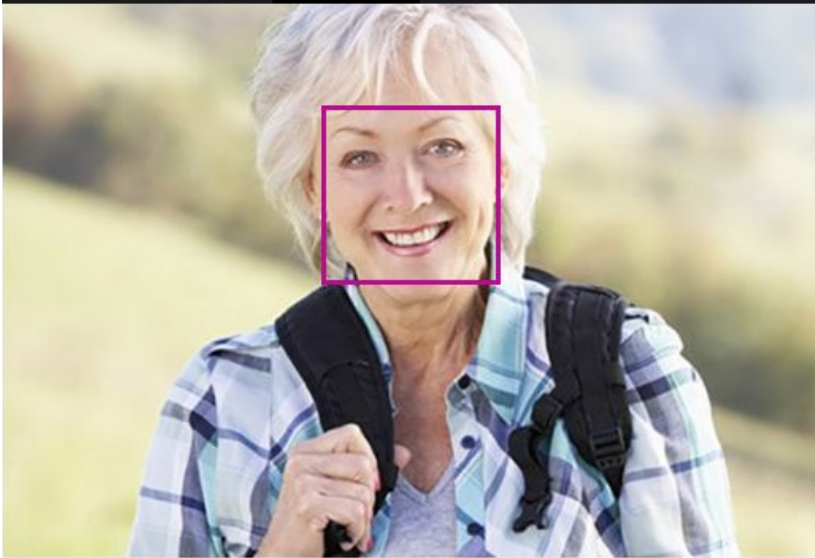


Image URL

Submit

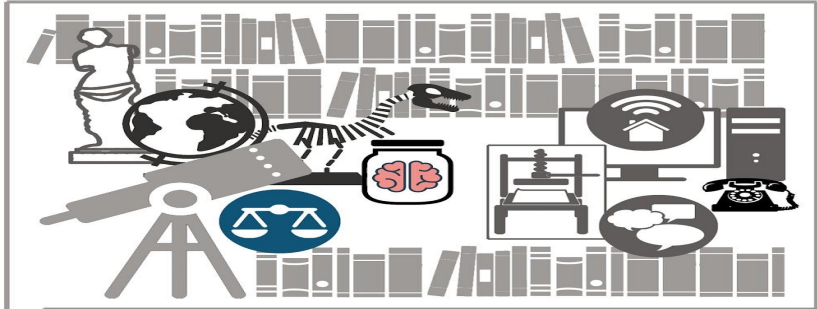
 Browse

Image URL

Submit

 Browse

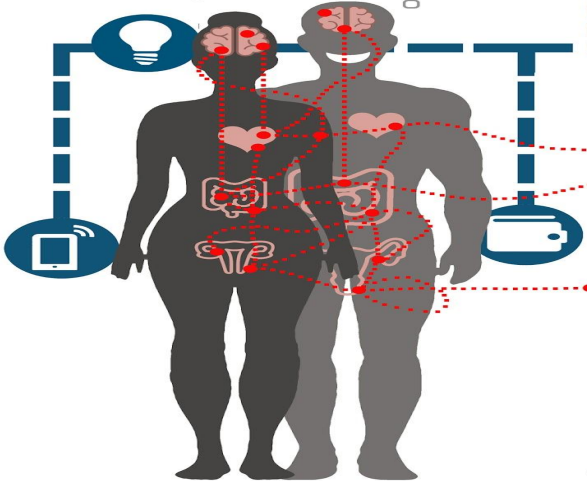
Verification result: The two faces belong to different people. **Confidence is 0.29593.**



DIGNITY
PERSONAL CHOICES
PARTNERS / FRIENDS

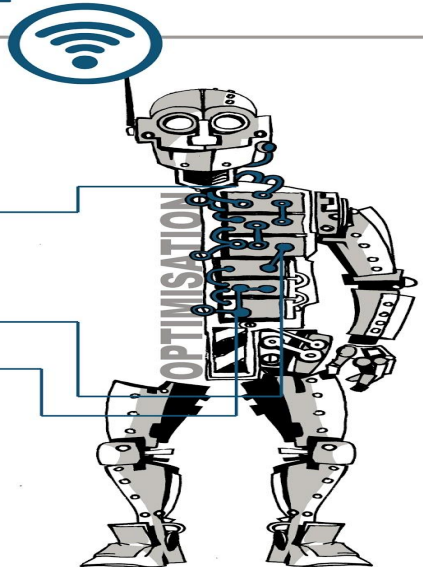
MARKET
CONSUMER CHOICES

DEMOCRACY
POLITICAL CHOICES



HUMAN CHOICES

DATA
A. B. C. A. B. C.
A. B. C. A. B. C.
A. B. C.



MACHINE CHOICES

About DiploFoundation

- Involved in digital diplomacy since 1992
- Established as an independent foundation by the governments of Malta and Switzerland in 2002
- Offices in Malta, Geneva, Belgrade, and Washington D.C.
- 30 full-time staff | 80 faculty & part-timers
- UN ECOSOC special consultative status
- Run wide range of courses on diplomacy, digitalisation, and international relations
- Conduct research on digital diplomacy and related fields
- Develop data and AI tools for diplomacy and international relations
- Alumni of over 7000 diplomats & officials from over 200 countries and territories
- Run Geneva Internet Platform and GIP Digital Watch

It is a bit freaky with this wireless technology

