Artificial Intelligence

Janyl Jumadinova

January 20, 2023

What is AI?

AI is the ability of a computer system to solve problems and to perform tasks that would otherwise require human intelligence.

What is AI?

AI is the ability of a computer system to solve problems and to perform tasks that would otherwise require human intelligence.
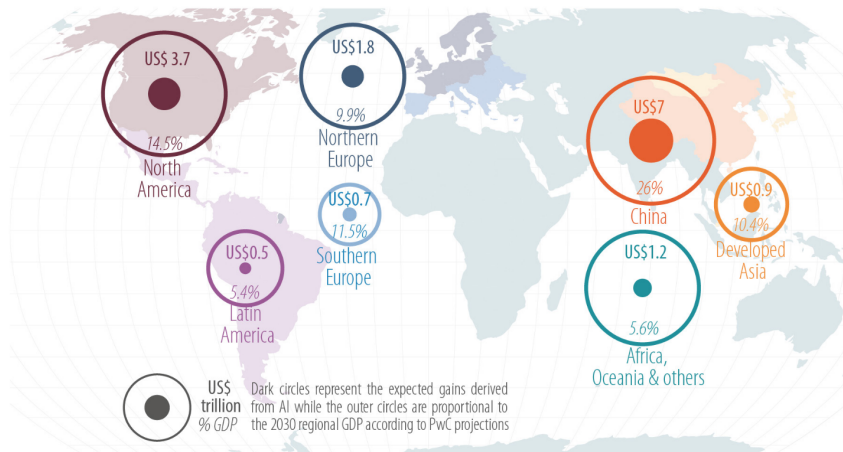

"**a branch of computer science that studies the properties of intelligence by synthesizing intelligence**"

What is AI?

Our 2021 Prediction	Grade	Evidence
Transformers replace RNNs to learn world models with which RL agents surpass human performance in large and rich games.	Yes	DeepMind's Gato model makes progress in this direction in which a transformer predicts the next state and action, but it is not trained with RL. University of Geneva's GPT-like transformer model IRIS solves tasks in Atari environments.
ASML's market cap reaches $500B.	No	Current market cap is circa $165B (3 Oct 2022)
Anthropic publishes on the level of GPT, Dota, AlphaGo to establish itself as a third pole of AGI research.	No	Not yet.
A wave of consolidation in AI semiconductors with at least one of Graphcore, Cerebras, SambaNova, Groq, or Mythic being acquired by a large technology company or major semiconductor incumbent.	No	No new announced AI semiconductor consolidation has happened yet.
Small transformers + CNN hybrid models match current SOTA on ImageNet top-1 accuracy (CoAtNet-7, 90.88%, 2.44B params) with 10x fewer parameters.	Yes	MaxViT from Google with 475M parameters almost matched (89.53%) CoAtNet-7's performance (90.88%) on ImageNet top-1 accuracy.
DeepMind shows a major breakthrough in the physical sciences.	Yes	Three (!) DeepMind papers in mathematics and material science.
The JAX framework grows from 1% to 5% of monthly repos created as measured by Papers With Code.	No	JAX usage still accounts for <1% of monthly repos on Papers With Code.
A new AGI-focused research company is formed with significant backing and a roadmap that's focused on a sector vertical (e.g. developer tools, life science).	Yes	Adept.ai was co-founded by the authors of the Transformer and is focused on AGI via software tool use automation.

https://www.stateof.ai/

Why AI?

Source: The macroeconomic impact of artificial intelligence, PwC, 2018.

Why AI?

Figure 2. Identifying Societal Drivers.

https://cra.org/ccc/visioning/visioning-activities/2018-activities/artificial-intelligence-roadmap/

Side Effects of AI

Google's AI for mammograms doesn't account for racial differences

By Amrita Khalid • January 9, 2020

Side Effects of AI

Google's AI for mammograms doesn't account for racial differences

By Amrita Khalid · January 9, 2020

THE WALL STREET JOURNAL.

Subscribe

Home   World   U.S.   Politics   Economy   Business   Tech   Markets   Opinion   Life & Arts   Real Estate   WSJ.Magazine

TECH

Facial-Recognition Software Suffers From Racial Bias, U.S. Study Finds

Report amplifies concerns about the rollout of algorithms that analyze images

Side Effects of AI

Google's AI for mammograms doesn't account for racial differences

By Amrita Khalid • January 9, 2020

THE WALL STREET JOURNAL.

Home World U.S. Politics Economy Business Tech Markets Opinion Life & Arts Real Estate WSJ. Magazine

Subscribe

TECH

Facial-Recognition Software Suffers From Racial Bias, U.S. Study Finds

Report amplifies concerns about the rollout of algorithms that analyze images

UN News Global perspective
Human stories

| HOME | TOPICS | IN DEPTH | SECRETARY-GENERAL | MEDIA |

Africa Americas Asia Pacific Middle East Europe History Corner UN Art and Gifts

AUDIO HUB SUBSCRIBE

Are robots sexist? UN report shows gender bias in talking digital tech

Side Effects of AI

Google's AI for mammograms doesn't account for racial differences

By Amrita Khalid · January 9, 2020

THE WALL STREET JOURNAL.

Subscribe

Home   World   U.S.   Politics   Economy   Business   Tech   Markets   Opinion   Life & Arts   Real Estate   WSJ. Magazine

TECH

Facial-Recognition Software Suffers From Racial Bias, U.S. Study Finds

Report amplifies concerns about the rollout of algorithms that analyze images

UN News   Global perspective Human stories

Search

Advanced Search

HOME		TOPICS		IN DEPTH	SECRETARY-GENERAL	MEDIA
Africa	Americas Asia Pacific	Middle East	Europe	History Corner	UN Art and Gifts

AUDIO HUB   SUBSCRIBE

Are robots sexist? UN report shows gender bias in talking digital tech

DEAN MOUHTAROPOULOS | GETTY. EDITED BY MIT TECHNOLOGY REVIEW

Artificial Intelligence / Machine Learning

Training a single AI model can emit as much carbon as five cars in their lifetimes

Deep learning has a terrible carbon footprint.

Guidelines from Microsoft

Activity 1