

An Introduction to Artificial Intelligence

A Technology Guide for Travel & Tourism Leaders

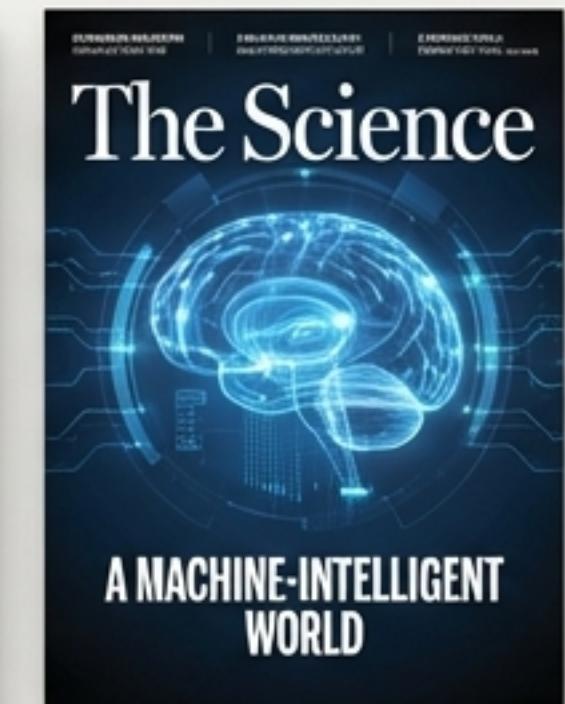
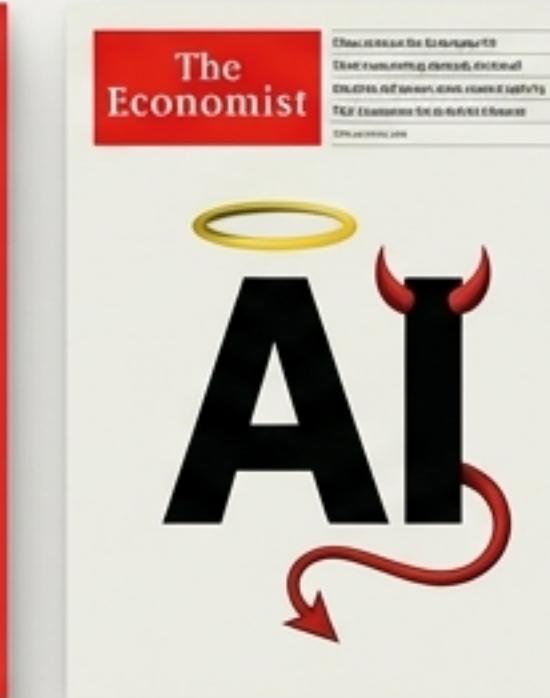
“...It happened gradually, then suddenly...”

– Ernest Hemingway, *The Sun Also Rises*



After Decades of Research, AI Has Suddenly Entered the Mainstream

In 2023, AI burst onto the scene, moving from scientific journals to global headlines. The international release of sophisticated AI chatbots like late 2022 caught the public's attention, registering over 100 million users in only two months and tipping the technology into the mainstream.



AI is Now a Topic of Global and Societal Importance.

In 1950, computer scientist Alan Turing posed a foundational question: “*Can machines think?*” Today, world leaders are grappling with the answer.

“One of the greatest technological leaps in the history of human endeavour.”

King Charles III

Described AI as “unprecedented.”

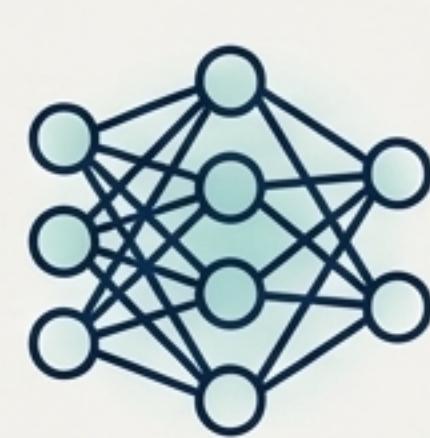
UN Secretary-General

“AI “has the potential to contribute in a positive way to the future of humanity.”

The Pope

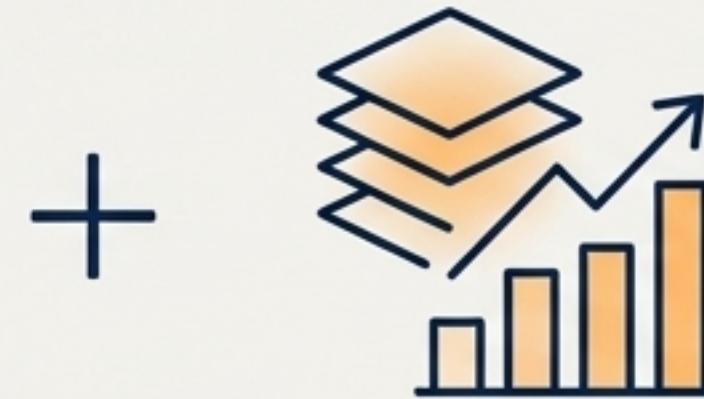
The Engine of Intelligence: Three Core Elements Powering AI

Advances in three key areas have converged to enable the recent breakthroughs in AI. Understanding these components is the first step to harnessing its power.



Algorithms

The Brains of AI



Data

The Fuel that Drives AI



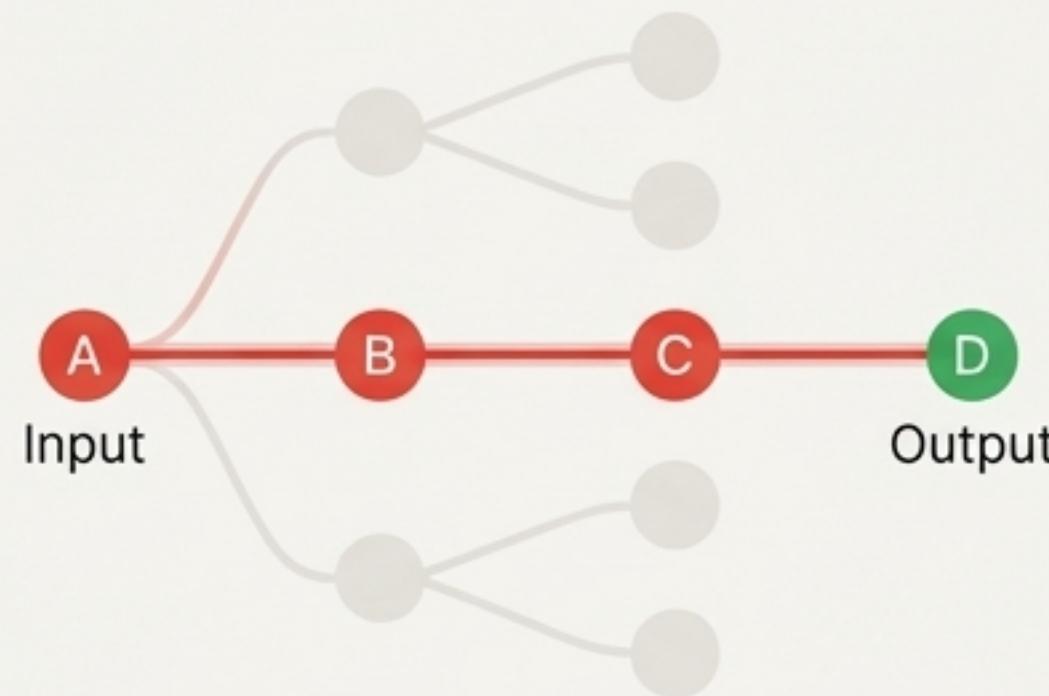
Compute

The Machines Behind AI



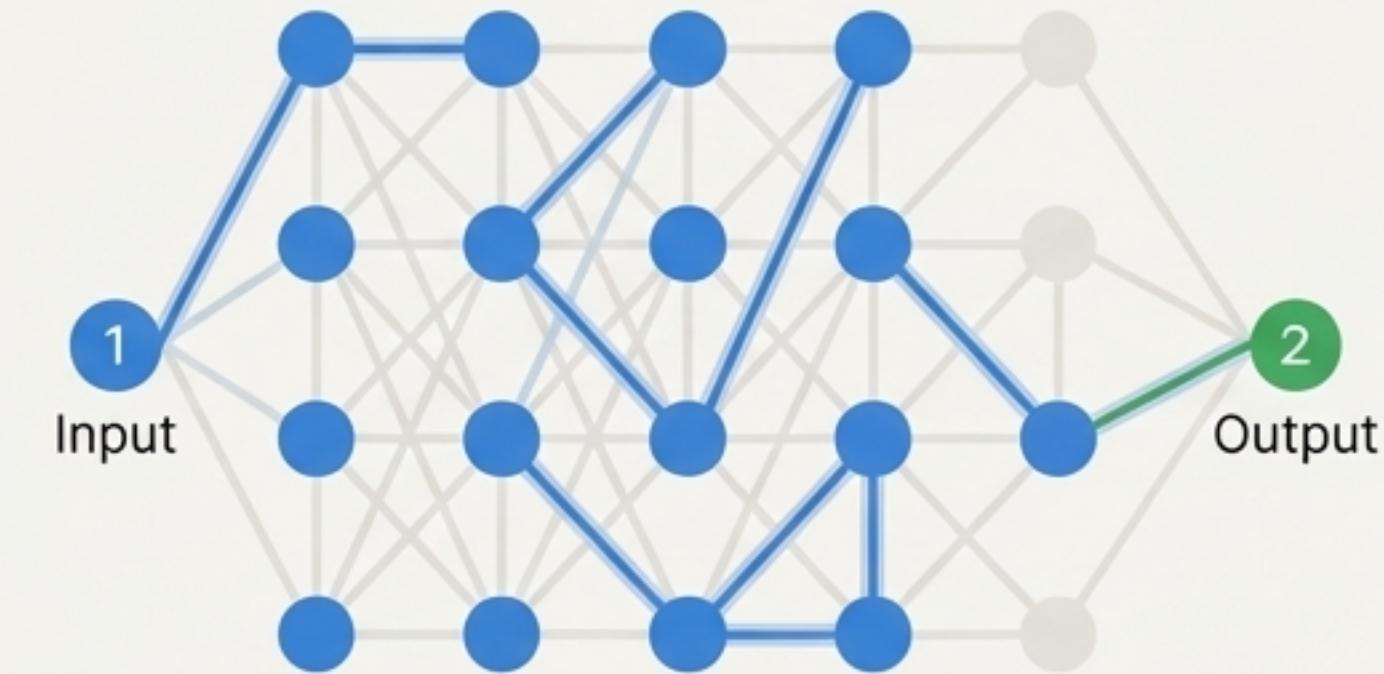
The Brains: How AI Systems Learn Differently

Traditional Programming



Follows a precise set of human-coded 'IF-THEN-ELSE' rules. The intelligence comes directly from human expertise.

Artificial Intelligence



Learns how to solve a problem by examining vast amounts of training data, not by following explicit steps. It can continuously improve with experience.

The 'Black Box'

Because AI systems learn on their own, it is not always possible to know exactly *how* they reached a decision. This is a key challenge known as "Explainable AI".

The Fuel and The Engine Powering Modern AI.

An Exploding Universe of Data

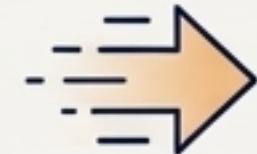
175 zettabytes

By 2025, the volume of data produced in the world each year could reach this level.

To put that in context, this is equivalent to the storage of **21 top-of-the-range laptops for every person on earth**.



Volume



Velocity



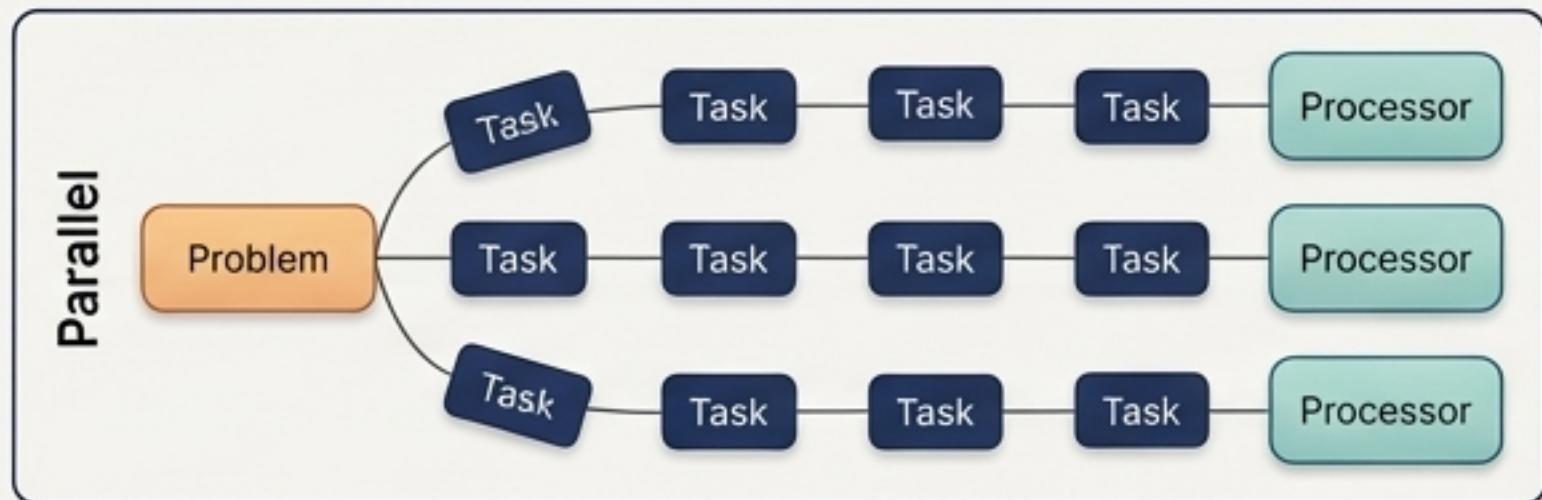
Variety



Veracity

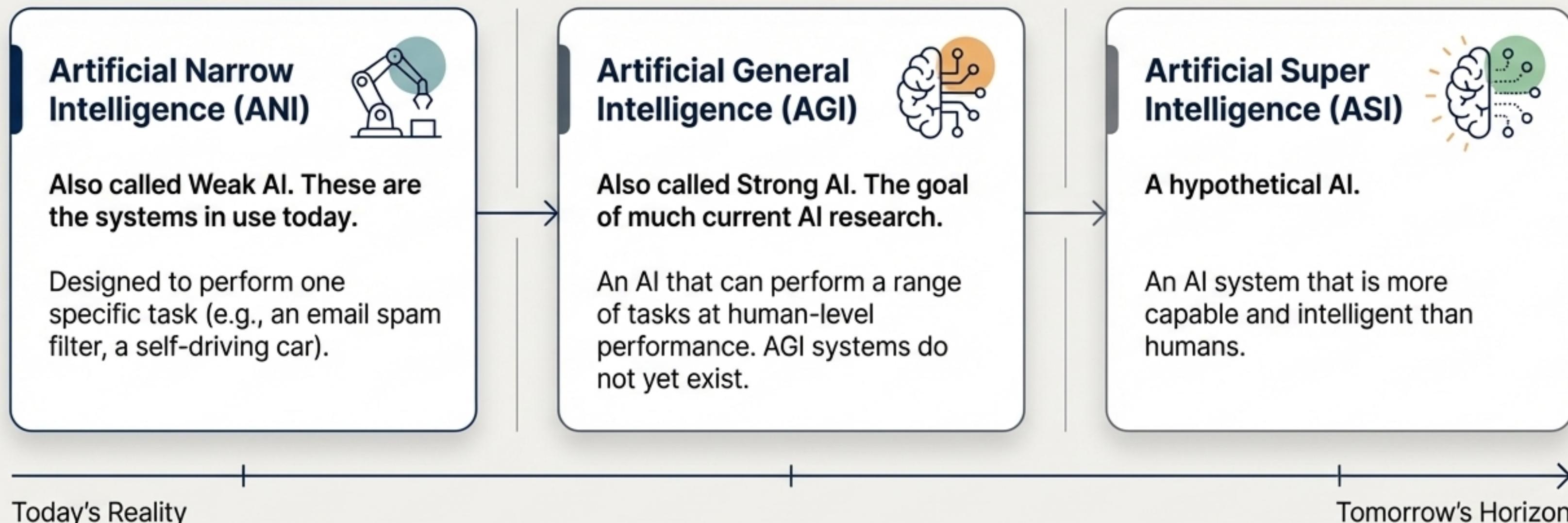
A Leap in Processing Power

Originally developed for the gaming industry, Graphics Processing Units (GPUs) are ideal for AI because they can process many tasks in parallel, dramatically accelerating the time it takes to learn from data.



A Framework for AI Capability: Today's Reality and Tomorrow's Horizon

AI systems can be classified by their level of capability. For leaders, it is critical to distinguish between what is practical today and what remains theoretical.



Spotlight on the Breakthrough: Generative AI.

“

Generative AI is a type of AI that can produce new, creative content—such as text, images, computer code, and audio—based on a user's prompt.

”

Generative AI, powered by Large Language Models (LLMs), is the technology behind the applications that have brought AI into the mainstream, like ChatGPT and image generators. This accessibility and creative potential has driven unprecedented interest and investment.

\$12 billion

Venture capital investment in generative AI solutions reached \$12 billion in the first six months of 2023 alone.

The Power and Pitfalls of Generative AI.

Complex Task Execution

Draw a table of reports published by WTTC in 2022 and include a short description of each report.

Report Title	Description
Travel & Tourism Economic Impact 2022: Global Trends and Recovery Analysis	Travel & Tourism is a trititowinn economic Impact on eoro 2022: global trends and recovery analysis.
Nature Positive Travel & Tourism: Framework for Sustainable Practices	The vopractory of Travel & Tourism entres to crerate a row: incnese encoremagement and sustainable asrsainment.
Nature Positive Travel & Tourism: Framework for Sustainable Practices	fnanic positive Travel & Tourism: emlenozed sustainable and development potavia stereit envirvments for its tarral facture.
Nature & Tourism Economic Tourism: Framework for Sustainable Practices	The ecmiets :growthis tourism sromil travel & engaiements rilly stroworih, and dato in the 'u/lat, ocesses and esonected mrode muelance.

Modern generative AI can understand context, summarize information, translate languages, and generate structured content in seconds.

Hallucinations

Hallucinations are outputs that sound convincing but are factually incorrect or nonsensical. This is a known limitation of current AI models.

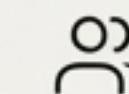
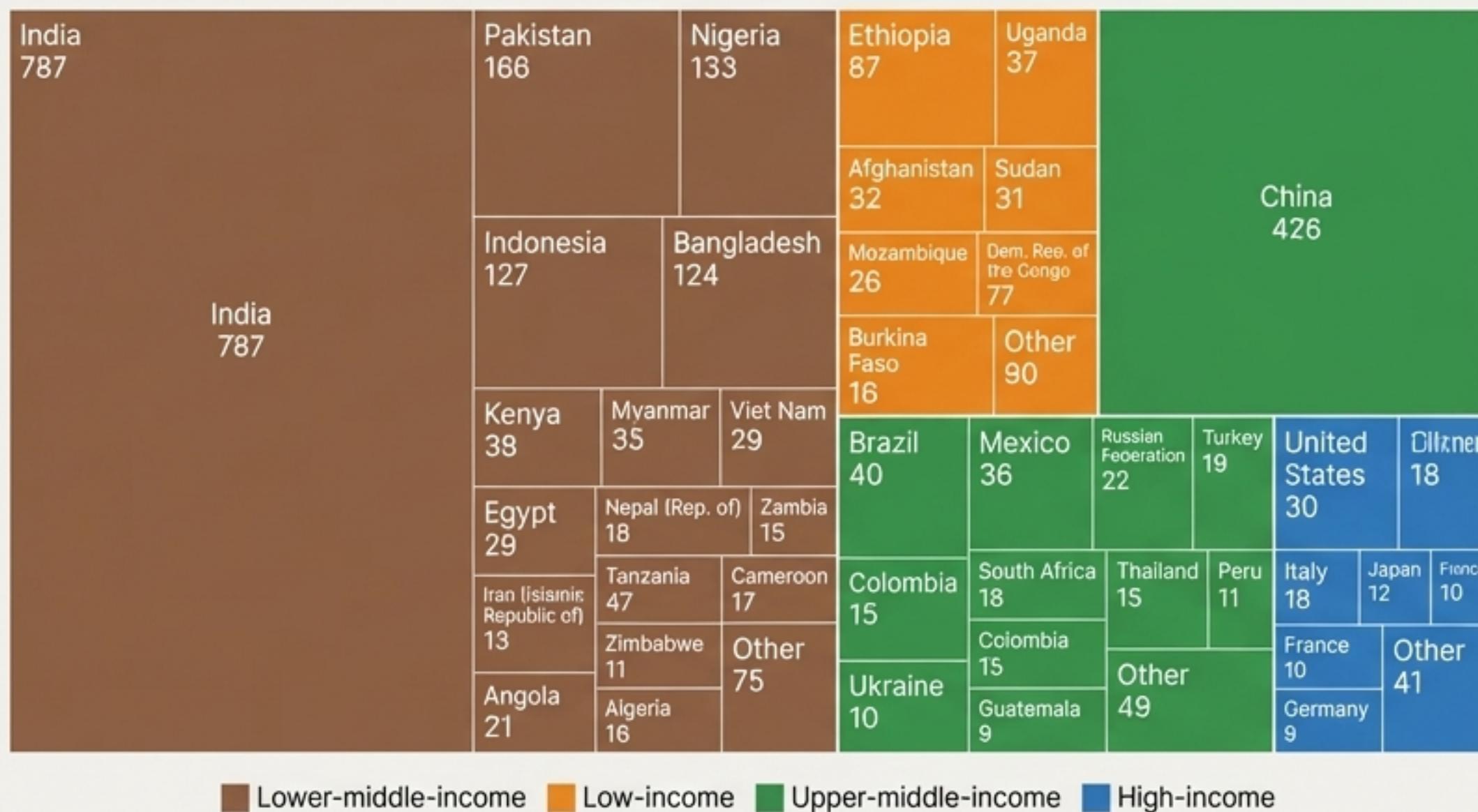
-  The model is not trained on enough data
-  The model is trained on noisy or dirty data
-  The model is not given enough context
-  The model is not given enough constraints

Key Takeaway: Leaders must implement processes to verify any AI-generated outputs that are business-critical.

The AI Revolution Must Not Widen the Global Digital Divide

“The future is already here—it’s just not evenly distributed.” - William Gibson

Individuals not using the Internet (millions), by income group, 2020



2.6 billion people

(34% of the world's population) have never been connected to the internet.

A third of the world's population

does not have access to the opportunities AI provides.

The Immediate Imperative for Leaders is a Critical AI Skills Gap

Successfully implementing AI is as much about people as it is about technology. A significant investment in workforce training is required.

40%

of their workforce will require re-skilling over the next three years due to AI and automation, according to business leaders.

- In 2023, there was a **20x** increase in the number of new job postings requiring AI skills.
- Yet, a global survey found that only **13%** of workers had been offered any form of AI training in the last 12 months.

We Are Only at the Beginning of This Transformation.

“We may be experiencing ‘only a foretaste of what is to come, and only the shadow of what is going to be.’”

– Alan Turing, 1949

Ultimately, AI is just an engine. The task now is to ensure that it fuels us towards a destination of our choosing – a sector that is greener, safer, more prosperous and more free.

