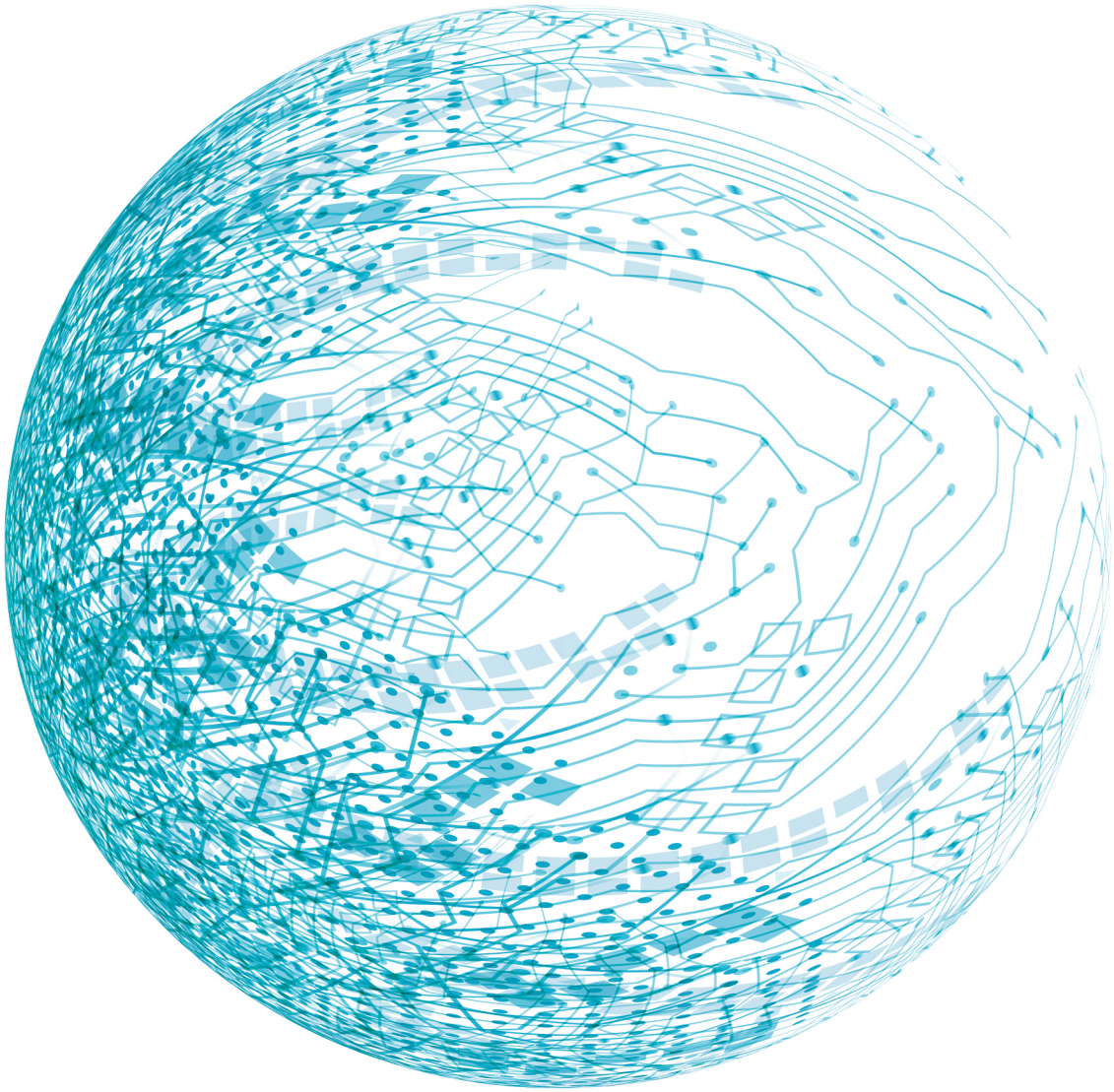
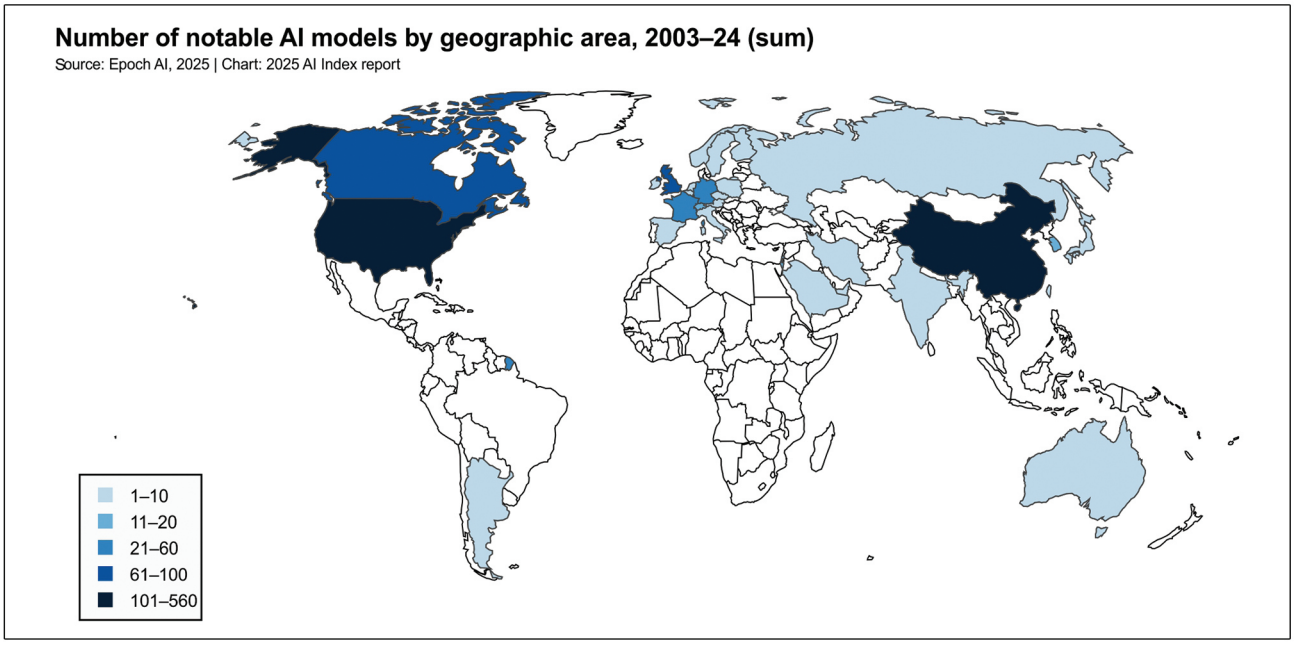
Visualisation of the current state of AI in the World



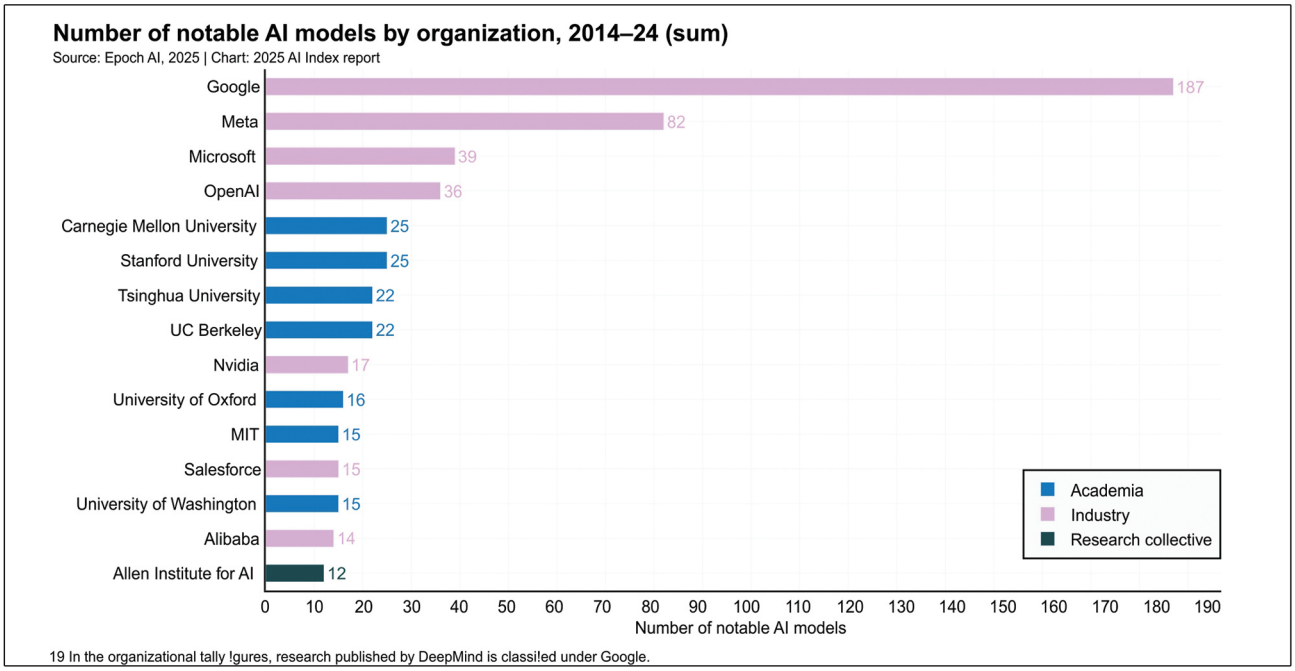
Artificial Intelligence will be like Electricity.
It will be everywhere.

Notable AI Models Worldwide

The U.S. still leads in producing top AI models — but China is fast closing the performance gap. In 2024, U.S. institutions produced 40 notable AI models, against China's 15 and Europe's 3 Model development is increasingly global, with notable launches from the Middle East, Latin America, and Southeast Asia.



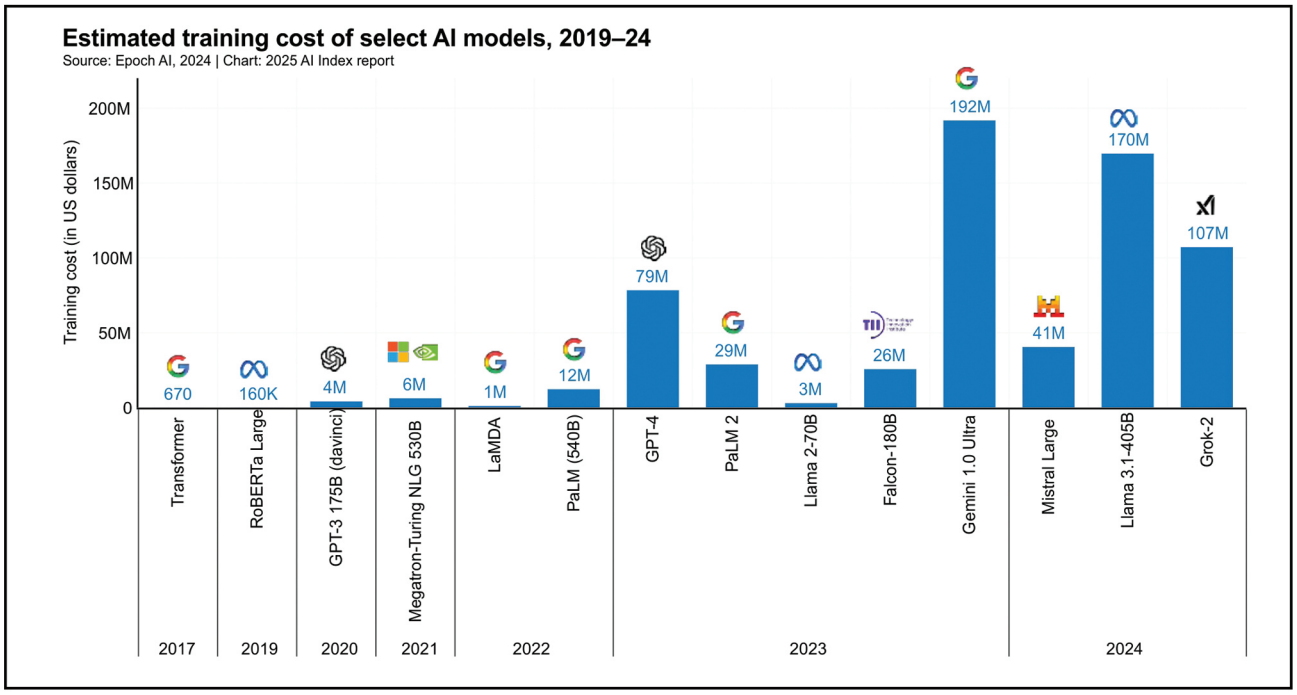
The United States continues to be the leading source of notable AI models. In 2024, the top contributors were Google (7), OpenAI (7), and Alibaba (6). Since 2014, Google has led with 187 notable models, followed by Meta (82) and Microsoft (39). Among academic institutions, Carnegie Mellon University (25), Stanford University (25), and Tsinghua University (22) have been the most prolific since 2014.



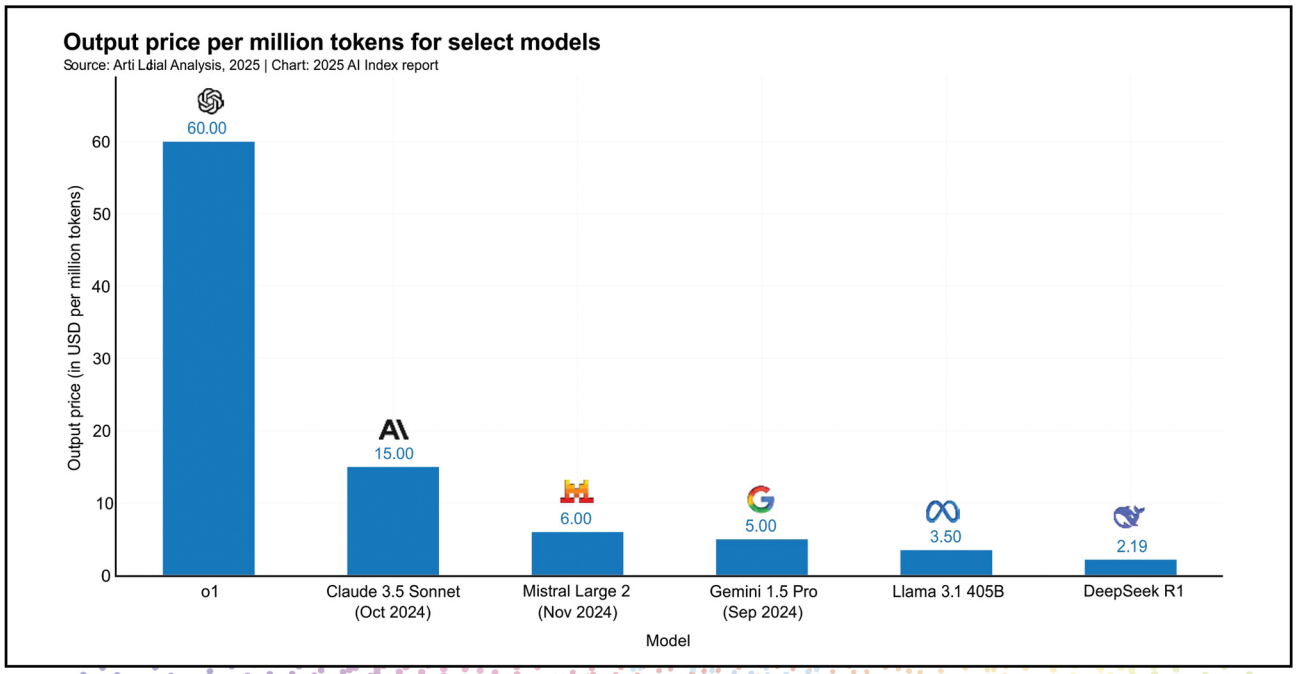
19 In the organizational tally !gures, research published by DeepMind is classi!ed under Google.

Cost and Price of AI

AI Index estimates confirm a significant rise in model training costs in recent years. For example, training costs soared from ~$670 for the 2017 Transformer model to ~$79 million for GPT - 4 in 2023. In 2024, Llama 3.1 - 405B had an estimated $170 million training cost.

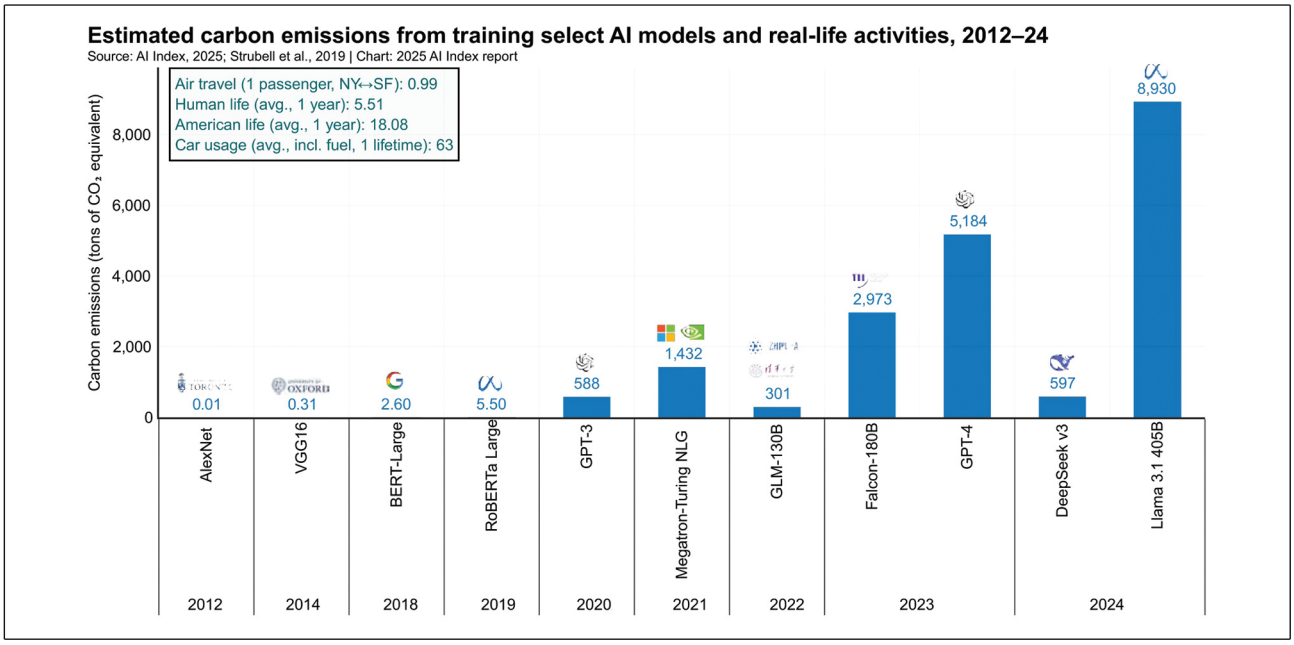


AI models become increasingly cheaper to use. The cost of querying an AI model had a more than 280-fold reduction in 18 months. However, state-of-the-art models remain more expensive than some of the previously mentioned alternatives. This figure illustrates the cost per million tokens for leading models from developers such as OpenAI, Meta, and Anthropic.



Energy Efficiency and Environmental Impact

Carbon emissions from AI training are steadily increasing. Training early AI models, such as AlexNet (2012), had modest amounts of carbon emissions at 0.01 tons. Recent models have significantly higher emissions for training: GPT-3 (2020) at 588 tons, GPT-4 (2023) at 5,184 tons, and Llama 3.1 405B (2024) at 8,930 tons



AI and Policymaking

Across the world, legislative proceedingsin AI keep rising. Left figure highlights the number of AI - related laws enacted in 2024 across the top 15 geographic areas. Russia led with seven laws, followed by Belgium and Portugal with 5 each. Right figure displays the total number of AI related laws passed since 2016, with the United States leading at 27, followed by Portugal and Russia, each with 20.