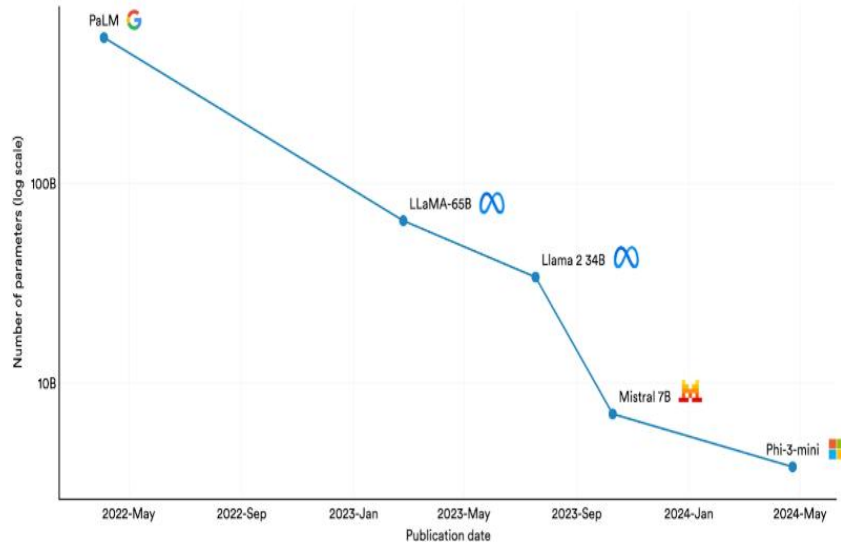


# AI Governance for Boards: Practical Strategies

# AI models are getting smaller, better and cheaper

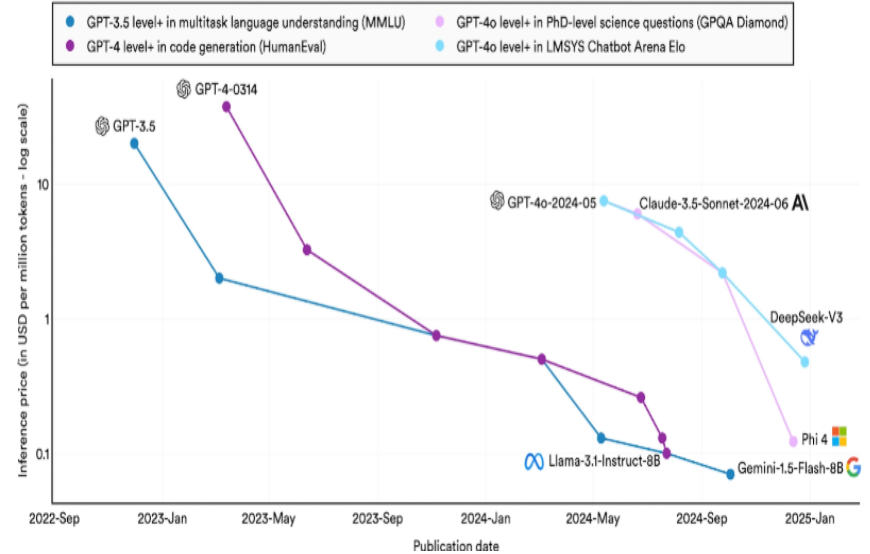
## Smallest AI models scoring above 60% on MMLU, 2022–24

Source: Abdin et al., 2024 | Chart: 2025 AI Index report



## Inference price across select benchmarks, 2022–24

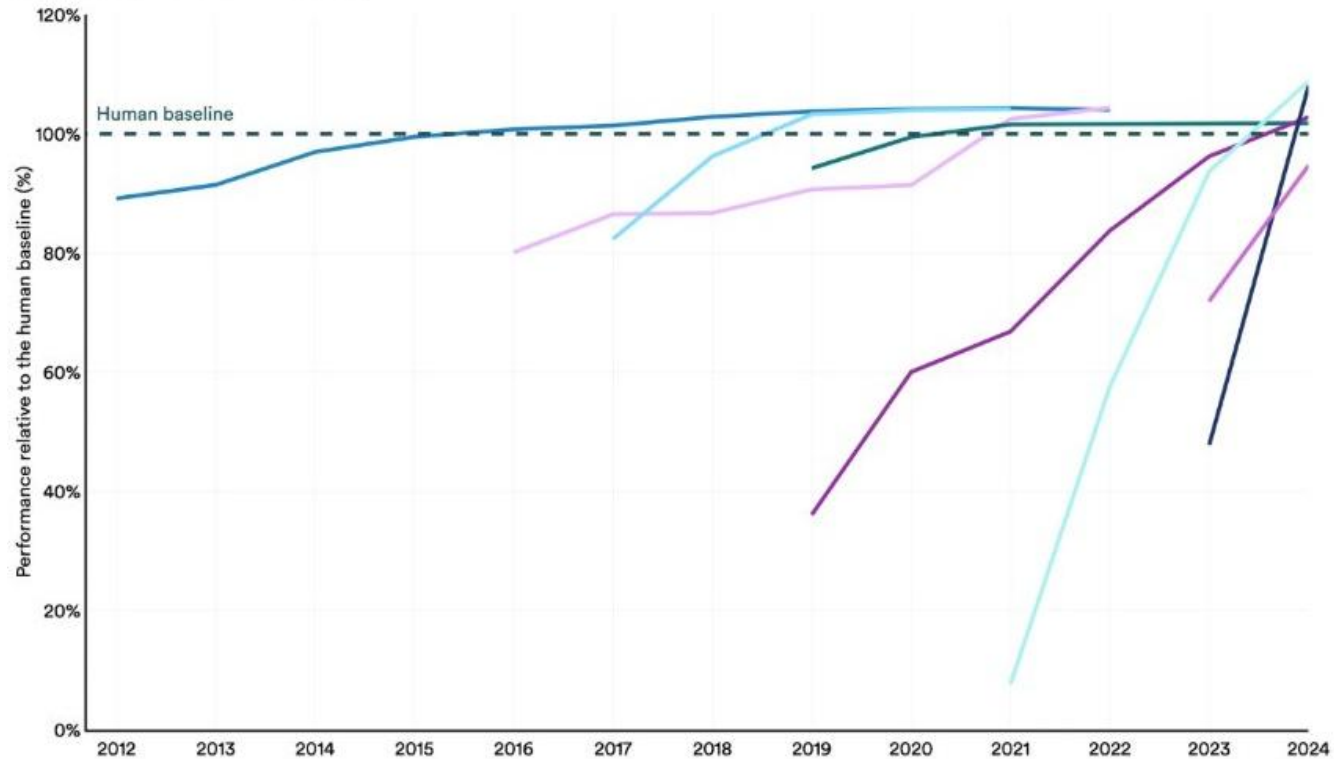
Source: Epoch AI, 2025; Artificial Analysis, 2025 | Chart: 2025 AI Index report



# AI abilities surpass human abilities in select areas

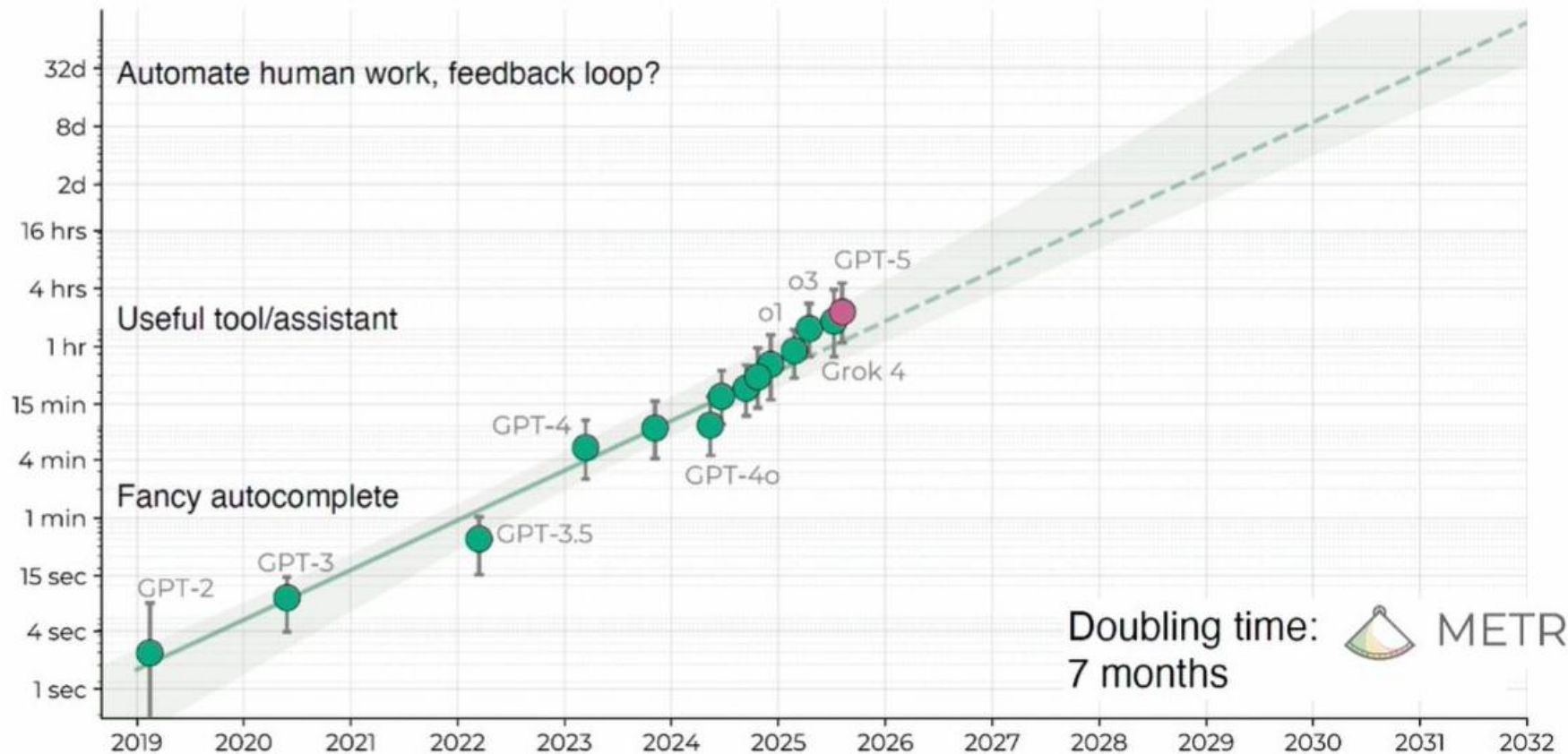
## Select AI Index technical performance benchmarks vs. human performance

Source: AI Index, 2025 | Chart: 2025 AI Index report



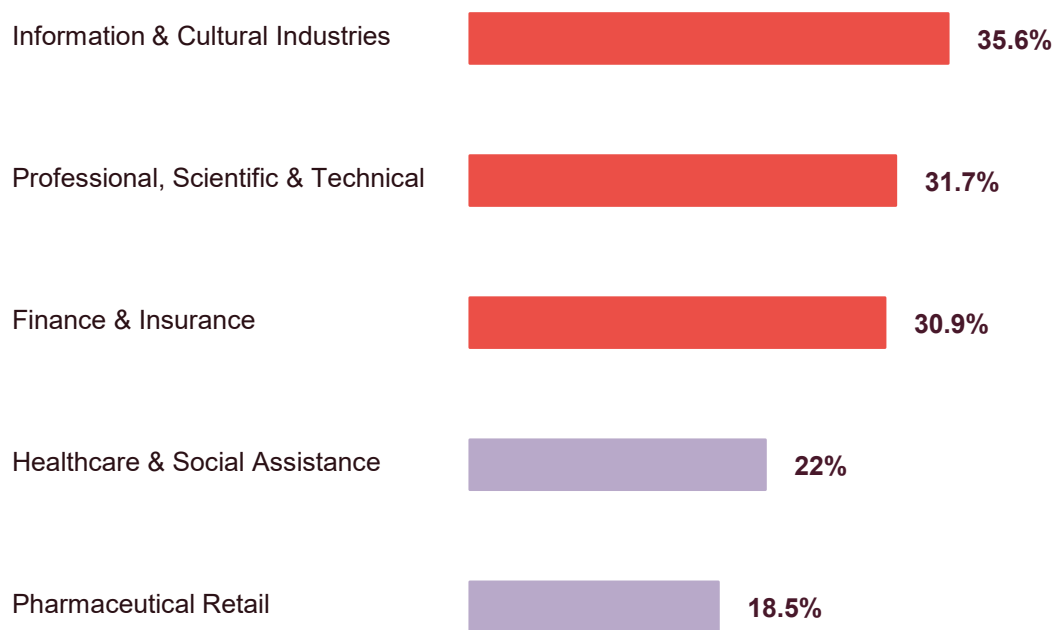
- Image classification (ImageNet Top-5)
- Medium-level reading comprehension (SQuAD 2.0)
- Multitask language understanding (MMLU)
- PhD-level science questions (GPQA Diamond)
- Visual reasoning (VQA)
- English language understanding (SuperGLUE)
- Competition-level mathematics (MATH)
- Multimodal understanding and reasoning (MMMU)

# AI that does month-long computer tasks plausible by 2031



# AI adoption is accelerating including in regulated sectors

## Industries Using AI in Canada (2025)



### Key Observations

- AI adoption in professional services is outpacing the broader economy
- Healthcare and pharmacy contexts are seeing significant AI investment in clinical decision support, documentation, and patient communication
- Most organizations (66.7%) still have no AI plans, which creates both risk and opportunity for regulators to get ahead of the curve
- Trust in AI remains low in Canada with 31% vs. 50%+ globally. This reinforces the need for credible regulatory guidance

# The growing trust gap

- Asked about AI specifically, just 31 per cent of Canadian survey respondents said they trusted the technology; total trust in AI was 19 percentage points lower in this country than the global average. (March 2024).
- 2024 CanTrust Index – one of the largest annual studies of trust in Canada– shows high economic anxiety, little trust in building affordable housing and declining trust in Artificial Intelligence. (Feb 2024).
- Canadians are skeptical across all sectors from government at 33 per cent, financial services at 29 per cent. healthcare at 29 per cent and retail at 22 per cent. Each sector has a job to do to build trust as it expands its use of AI. (Feb 2024).
- Over the next 12 months, the majority of Canadian businesses (71.8%) reported not having plans to use AI, while 17.6% remain unsure about their AI use over the next 12 months. (Sept. 2024).

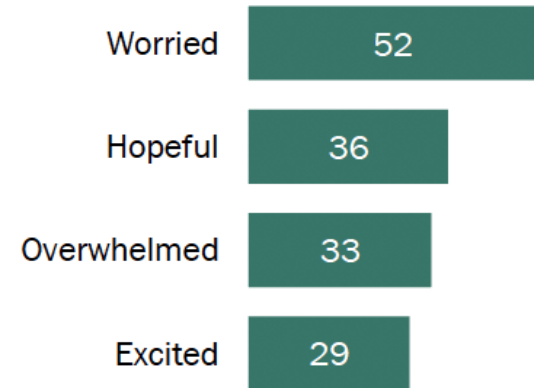
**Sources:** Distrust of AI significantly higher in Canada than other countries, survey finds - The Logic

2024 CanTrust Index reveals low trust in building affordable housing and falling trust in Artificial Intelligence | GlobeNewswire Press Releases | [thecanadianpressnews.ca](https://www.thecanadianpressnews.ca)

Analysis on expected use of artificial intelligence by businesses in Canada, third quarter of 2024

## Workers are more worried than hopeful about future AI use in the workplace

*% of employed adults saying they generally feel \_\_\_ about how AI may be used in the workplace in the future*



# What Is agentic AI?

*From responding to acting — AI that pursues goals across extended horizons*

## Autonomous Agents

AI systems given a goal and left to plan and execute sequences of actions over time — browsing the web, writing code, sending emails — with minimal human intervention.

Key shift: from tool to actor

## Tool Use

LLMs augmented with the ability to call external APIs, search the web, run code, or access databases. Combines reasoning with real-world action and information retrieval.

Key shift: from language to capability

## Multi-Agent Systems

Networks of AI agents that coordinate, delegate, and verify each other's work. Enables parallelism and specialization — and creates complex chains of responsibility.

Key shift: from individual to system

# What's uniquely risky about agents?

*Same core harms — but different amplification mechanisms*

## 01 Loss of Control

Agents can chain actions and spend money or commit organizations without granular approval. Small harmful decisions compound before anyone notices — e.g., a trading agent making a series of individually acceptable but collectively ruinous trades.

## 02 Opacity & Auditability

Agents generate not just outputs, but sequences of decisions, API calls, and state changes. Without logging and traceability, it is difficult to reconstruct what happened — or to satisfy regulatory obligations after the fact.

## 03 Cybersecurity & Fraud Surface

Agents can be targeted with prompt injection — then act on compromised instructions (send data, approve payments, change configurations). They can also be weaponized: automated phishing, deepfake distribution, or vulnerability scanning.

## 04 Human Displacement of Judgment

When agents operate as 'digital teammates,' humans may over-delegate, rubber-stamp, or lose situational awareness — weakening the 'human-in-the-loop' safeguards that most existing AI governance frameworks assume.

# Global regulatory landscape

## Emerging Global AI Legislation

### Bill C-27 Part I+II, *Canadian Consumer Privacy Protection Act*

Repeals and replaces PIPEDA

### Bill C-27 Part III, *Artificial Intelligence and Data Act (not advancing)*

Defines categories of 'high impact' AI systems and establishes legal requirements for those developers or deploying such systems

### EU's Artificial Intelligence Act (in force)

Establishes legal requirements for the developers and deployers of "high risk" and "limited risk" AI systems, including General-purpose AI systems (e.g., generative AI)

### President Trump's Executive Order on AI (federal)

Seeks to establish American global leadership and dominance in AI.

### Colorado's Consumer Protections for AI (state)

Establishes requirements for high-risk AI systems for both deployers and developers in a similar manner to the EU AI Act and AIDA.

Various other AI laws are in the works, including in the UK, South Korea, China, Australia, Japan, and more ([source](#)).

## Compliance Frameworks and Guidance



### Guidance and "Self-regulation"

For example: NIST AIRMF, Canada's Voluntary Code on AI, guidance from various Commissioners across Canada



### Sectoral-based Guidance

For example: Health Canada's SaMD, CMA guidance, CPSO rules and guidance



### AI Standards

For example: ISO/IEC 42000 series, Canada's Digital Governance Standards Institute, FPT AI4H Guiding Principles

# Regulation of AI and data in Canada



Minister of Artificial Intelligence and Digital Innovation and Minister responsible for the Federal Economic Development Agency for Southern Ontario

## “ Light, tight, and right

**Light regulation:** Government will not impose strict regulations that could hinder innovation. Focus is on investing in regulation that supports innovation while protecting privacy.

**Tight compliance:** Intention is to ensure AI systems comply with established guidelines and standards for maintaining trust and confidence in technology.

**Right framework:** Tailored regulations that are appropriate for the evolving nature of AI technology, ensuring regulation is not overly complex or outdated.