

My Musings: Is The Robot Era Arriving Too Early?

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The current technological landscape

As I see it, the landscape is defined by a relentless and almost insatiable pursuit of cutting-edge innovation, particularly in the realm of artificial intelligence. This drive to be "first" extends beyond mere market share; it is about shaping the very fabric of the future. The palpable excitement surrounding these advancements is matched by an underlying tension, as the world grapples with the high stakes of this global competition. It feels like we're moving from an agile approach to an AI approach, and then, perhaps, to an AGI approach. You see what I did there? AgIle (A and I in agile), AGI (first three letters in agile). It's a subtle nod to how quickly things are evolving.

The competition itself is why technology we once expected decades from now is arriving way too early. The early bird gets the worm, right? And what's fascinating is how quickly humans have embraced AI, the same humans who fought the telephone and the internet just some years back, looking at them like witchcraft. With this new embrace of everything AI, we as humans are likely to embrace the robot era. This doesn't mean it won't be called the antichrist or the end of human civilization by some, but it's just common math.

AI's Fast Lane: The Race for General Intelligence

The AGI Horizon: Closer Than We Think?

The rapid development of AI makes me think that humanity will arrive at Artificial General Intelligence (AGI) before 2030. The timeline for AGI and Artificial Superintelligence (ASI) remains a topic of intense discussion among AI experts, with predictions constantly being revised and often accelerated. Prominent figures in the field offer a wide range of forecasts. Sam Altman, CEO of OpenAI, has suggested that AGI could arrive sooner than anticipated, possibly as early as 2025, though he envisions a gradual rather than revolutionary impact. Dario Amodei, CEO of Anthropic, similarly predicts AGI by 2026, describing it as akin to "a country of geniuses in a data center". Elon Musk also anticipates the development of an AI smarter than the smartest humans by 2026.

In contrast, other experts offer more conservative estimates. Demis Hassabis, CEO of Google DeepMind, believes human-level reasoning AI is at least a decade away, while Geoffrey Hinton, often called the "Godfather of AI," estimates AI could surpass human intelligence within 5 to 20 years. Broader surveys of AI researchers tend to project AGI around 2040 to 2060, though these predictions have also been moving forward. For instance, the Metaculus community's AGI forecast for a 50% likelihood shifted from

2041 to 2031 in just one year, reflecting rapidly accelerating expectations among forecasters. This accelerating perception of AGI's arrival creates immense pressure on companies and nations to invest more, move faster, and compete more fiercely, as the perceived window for "arriving first" narrows. This psychological aspect of the race is as powerful as the technological advancements themselves.

The wide variance in these predictions highlights the highly speculative nature of AGI development. Unlike a linear engineering problem, the path to AGI is fraught with unknowns. This speculative environment, however, paradoxically intensifies the race. Companies and investors are willing to pour billions into the field on the chance that the more optimistic, earlier timelines are correct, because the payoff for being "first" could be transformative, or conversely, the cost of being "late" could be existential. It represents a high-stakes gamble driven by the potential for future dominance.

Here is a summary of key AGI timeline predictions from prominent experts:

| Expert Name | Affiliation | Predicted AGI/ASI Arrival Year |
|------------------------|-----------------------|------------------------------------|
| Sam Altman | OpenAI CEO | Possibly 2025 |
| Miles Brundage | Former OpenAI | Within a few years |
| Dario Amodei | Anthropic CEO | 2026 |
| Elon Musk | Tesla, xAI | 2026 |
| Masayoshi Son | Entrepreneur/Investor | 2027 or 2028 |
| Jensen Huang | Nvidia CEO | 2029 |
| Louis Rosenberg | Computer Scientist | 2030 |
| Ray Kurzweil | Computer Scientist | 2032 |
| Geoffrey Hinton | "Godfather of AI" | 5 to 20 years (from 2023) |
| Demis Hassabis | Google DeepMind CEO | At least a decade away (from 2024) |
| Sam Altman | OpenAI CEO | By 2035 ("few thousand days") |
| Ajeeya Cotra | AI Researcher | 50% chance by 2040 |
| Patrick Winston | MIT Professor | 2040 |

| | | |
|------------------------------|-------------------------|---|
| Jürgen Schmidhuber | AI Company NNAISENSE | By 2050 |
| Metaculus Community | Prediction Platform | 50% likelihood by 2031 |
| AI Researchers Survey | AI Impacts (2023) | High-level machine intelligence by 2040 |
| AI Researchers Survey | AI Impacts (2022) | 50% chance by 2059 |
| Baobao Zhang Survey | AI Experts | 50% before 2060 for 90% job automation |

The Leap to Superintelligence: Gradual or Explosive?

Beyond the initial attainment of AGI, experts also debate how quickly it might evolve into Artificial Superintelligence (ASI). Yoshua Bengio suggests that this transition could occur within months to years if AI systems begin self-improving. Conversely, Sam Altman predicts a more gradual transition rather than an abrupt "intelligence explosion". While predictions vary, most experts surveyed believe that once AGI is reached, it will progress to superintelligence relatively quickly, with timeframes ranging from as little as 2 years (though with a low 10% probability) to about 30 years (with a high 75% probability).

The differing views on the speed of ASI transition reveal a critical underlying tension: the inherent difficulty of implementing agile regulations that can remain effective as AI rapidly evolves. If the transition is indeed explosive, current regulatory efforts will be woefully inadequate to address the profound implications. This lack of consensus on the speed of post-AGI development means that the "race to be first" is largely unconstrained by agreed-upon safety measures, potentially leading to a "move fast and break things" mentality with potentially catastrophic consequences, including risks of human extinction.

Breakthroughs and Investments

Technological Leaps: The New AI Frontier

The acceleration of the AI race is underpinned by significant technological advancements that are pushing the boundaries of what machines can do. Large

Language Models (LLMs) such as GPT-4, PaLM, and Claude stand at the forefront of AI research. These systems, trained on vast datasets, demonstrate capabilities like human-like dialogue, creative content generation, and complex reasoning tasks, which would have seemed like science fiction just a decade ago.

Beyond text, recent progress in multi-modal AI is bridging the gap between different AI domains. Systems like DALL-E 2 and GPT-4 with vision capabilities can process and generate various types of data, including text, images, and audio, mimicking the human ability to integrate information from multiple senses. Reinforcement learning, where AI agents learn through trial and error, has also yielded remarkable results, with DeepMind's AlphaGo achieving superhuman performance in games and now tackling real-world problems in robotics and resource management. The concept of "foundation models" -large AI systems like BERT and GPT that can be adapted for a wide range of tasks - is gaining traction, serving as a base for numerous applications and potentially offering a path to more general intelligence. These advancements are the tangible evidence of the "cutting-edge innovation" driving the current intense competition.

The Billion-Dollar Sprint: Investments and Talent Wars

The "insatiable race" for AI dominance is vividly illustrated by the unprecedented financial investment flowing into the sector and the fierce competition for top talent. The global AI market was valued at \$391 billion in 2025 and is projected to reach \$1.81 trillion by 2030, growing at a Compound Annual Growth Rate (CAGR) of 35.9% - a rate faster than the cloud computing boom of the 2010s. So far, in 2025 alone, \$107 billion was deployed globally into AI startups, representing a 28% year-over-year increase, with AI startups accounting for 26% of all global venture capital funding. Tech giants like Google, Microsoft, Meta, and Amazon collectively spent \$52.9 billion in capital during Q2 2024, primarily focused on AI development and infrastructure. OpenAI leads the AI startup funding landscape with \$11.3 billion, followed by Anthropic with \$7.7 billion. Notably, 50% of tech unicorns in 2024 are AI-related startups, signaling strong investor confidence.

The battle for human capital in the AI space has reached extraordinary levels. Sam Altman publicly claimed that Meta was approaching OpenAI talent with offers of "\$100M signing bonuses" to join Mark Zuckerberg's new "Superintelligence" Team. While the exact figures are debated, reports indicate Meta has indeed offered staggering compensation packages, such as \$200 million for Apple's Ruoming Pang and \$100 million for OpenAI's Trapit Bansal, including base salary, substantial signing bonuses, and large equity grants with performance-linked clauses. Meta's Superintelligence Lab is

explicitly being built to rival OpenAI and Google DeepMind, with Zuckerberg making AI the company's top priority.

The prevalence of "acqui-hire" deals further underscores the competitive nature of this race. Google, for example, hired key staff from AI code generation startup Windsurf after OpenAI attempted to acquire it, with the former Windsurf team joining Google's DeepMind to focus on agentic coding initiatives. This strategic maneuver, also seen with Microsoft's deal with Inflection AI, Amazon's hiring of Adept's co-founders, and Meta's stake in Scale AI, allows companies to absorb external talent and intellectual property without the full regulatory scrutiny of traditional acquisitions. This indicates a highly competitive environment where companies are willing to push boundaries to gain an edge, potentially leading to market concentration and stifling smaller innovations in the long run. This is a direct consequence of the "insatiable" nature of the race.

Meta's explicit focus on a "Superintelligence Lab" aiming to "far exceed human intelligence in all domains" signifies a strategic leap beyond merely achieving AGI. This indicates that the "race to be first" is not just about reaching human-level AI, but about establishing dominance in the subsequent, potentially more powerful, phase of AI development. This long-term vision, backed by staggering talent investments, implies a belief that the ultimate "winner" will be the one who masters ASI, not just AGI.

Here is a summary of major AI company investments and key talent acquisitions from 2024-2025:

| Company/Entity | Type of Investment/Acquisition | Key Figures/Companies Involved | Value (if available) | Purpose/Focus |
|------------------|--------------------------------|---------------------------------|-------------------------------|--|
| Global AI Market | Market Size/Growth | N/A | \$391B (2025), \$1.81T (2030) | Exponential growth, enterprise/consumer adoption |
| Tech Giants | Capital Spending | Google, Microsoft, Meta, Amazon | \$52.9B (Q2 2024) | AI development & infrastructure |
| AI Startups | VC Funding | N/A | \$107B (2025) | 26% of global VC funding, |

| | | | | |
|------------------|--------------------|--|---------------------------|---|
| | | | | 50% of 2024 unicorns |
| OpenAI | Startup Funding | N/A | \$11.3B | AI model developer |
| Anthropic | Startup Funding | N/A | \$7.7B | AI model developer, AI safety research |
| Meta | Talent Acquisition | Ruoming Pang (Apple), Trapit Bansal (OpenAI) | \$200M, \$100M (reported) | Building "Superintelligence" Team, rivaling OpenAI/Google |
| Google | Acqui-hire | Windsurf CEO & researchers | Non-exclusive license | Agentic coding, Gemini project |
| Microsoft | Acqui-hire | Inflection AI | \$650M | Use AI startup's models, hire staff |
| Amazon | Acqui-hire | Adept co-founders & team | N/A | Hire AI firm's team |
| Meta | Stake Acquisition | Scale AI | 49% stake | Business partnership, talent acquisition |

Quantum Computing's Role – beyond the finish Line

These components, amongst quantum computing at a commercial level, would be the major components of the robot era. The era where humans will either rely absolutely on machines or be augmented with them (cyborg-style enhancements). AI beyond just Nvidia chips, AI will accelerate faster in the quantum era. If you are late to the AI race, you can still get ahead with robots or quantum or any other hardware that follows. Besides, if you missed leading the brain age (AI being the core brain), you still have the chance to catch up with the body race (hardware). AI and AGI will give way to massive

change in hardware. The future hardware won't need to be big to perform. Quantum computing at a minimal level means that the hardware of the future (consumer tech mostly) just needs minimal parts to function (this aside mechanical hardware for transportation, production, space travel, etc.).

The Quantum Leap for AI Acceleration

Parallel to the AI innovation race, quantum computing is emerging as a critical, intertwined frontier. The Quantum Technology (QT) industry has seen a pivotal shift in 2024, moving from merely growing quantum bits (qubits) to stabilizing them, signaling its readiness for integration into mission-critical industries. This industry is projected for substantial growth, with revenue expected to surge from \$4 billion in 2024 to as much as \$72 billion by 2035. Investments are gaining momentum, with private and public investors pouring nearly \$2 billion into QT startups worldwide in 2024, a 50% increase from the previous year. Quantum computing companies alone generated between \$650 million and \$750 million in revenue in 2024, with projections to surpass \$1 billion in 2025.

As of 2025, estimates suggest approximately 1,000 quantum computers exist globally, though only about 100 to 200 are fully calibrated and operational. Leading companies such as IBM, Google, Honeywell, Microsoft, and D-Wave are actively providing commercial access to quantum computing, often through cloud services. Microsoft, for instance, introduced the Majorana 1 chip in February 2024, the world's first quantum processor powered by topological qubits. While McKinsey estimates 5,000 operational quantum computers by 2030, the hardware and software required to tackle the most complex problems are not expected to be widely available until 2035 or later.

The relationship between AI and quantum computing is not merely additive; it is profoundly symbiotic. Quantum computers possess the potential to supercharge AI by performing complex matrix operations much faster than classical systems, thereby speeding up deep learning training and enhancing optimization tasks like fine-tuning machine learning models. They can also process and classify large datasets more efficiently and enable AI to tackle problems currently beyond the reach of classical computers, such as drug discovery and materials science. Conversely, AI can significantly aid quantum computing. Machine learning can be applied to auto-calibration routines, error correction, and the optimization of quantum algorithms, leading to more reliable and efficient quantum systems. AI can even assist in chip design, discovering better error-correcting codes that minimize qubit requirements and computation time. This means the "race to be first" in AI is increasingly dependent on breakthroughs in quantum computing, and vice-versa. This creates a powerful feedback

loop where progress in one field directly propels the other, intensifying the overall innovation pace and making the "who arrives first" question even more complex, as it might involve a combined AI-Quantum breakthrough. Quantum technology offers a more sustainable, efficient, and high-performance solution that will fundamentally reshape AI, dramatically lowering costs and increasing scalability, while overcoming the limitations of today's classical systems.

The shift from merely growing qubits to stabilizing them and the increasing commercial access provided by major players indicate that quantum computing is moving beyond pure research into a more mature, commercially viable phase. This maturation, coupled with surging investments, means the "race to be first" in quantum is no longer just academic; it is about establishing market dominance and securing a foundational technology that could dictate the future of AI and other industries. The substantial revenue projections underscore the immense economic stakes involved.

Potholes and Pitfalls: Challenges and Concerns

The Ethical Mine of AGI Development

The relentless pursuit of AGI is accompanied by significant technical, ethical, and safety challenges. A major technical hurdle lies in designing robust learning algorithms capable of acquiring and applying knowledge across diverse domains, especially given the complexity and diversity of human tasks. AGI systems must exhibit continuous adaptation, learn from limited data, transfer knowledge between tasks, and adapt to novel situations, necessitating advancements in areas like unsupervised learning, reinforcement learning, and meta-learning. Furthermore, AGI must be capable of handling uncertainty, integrating diverse sub-skills, and exhibiting creativity abilities that are inherently complex and multifaceted in human intelligence.

Beyond technicalities, ethical and safety considerations are paramount. Ensuring that AIs make decisions aligned with human values is a critical challenge, especially as they become more capable and autonomous. This includes addressing issues such as algorithmic bias, which can perpetuate or exacerbate existing biases present in training data, leading to unfair or discriminatory outcomes. The potential for catastrophic outcomes in unanticipated scenarios, such as autonomous vehicles causing accidents or intelligent systems exploiting loopholes in their objectives, necessitates robust testing, validation, and the development of ethical frameworks.

The stakes are exceptionally high. Geoffrey Hinton estimates a 10-20% chance that advanced AI could wipe out humanity within decades, and a 2022 survey of AI

researchers found that 37-52% believed there was at least a 10% risk of human extinction due to AI. Potential dangers include AI viewing humans as irrelevant or an obstacle, totalitarian control enabling unprecedented surveillance, or vast concentrations of power if superintelligence is developed by a select elite. Yoshua Bengio warns that if ASI prioritizes its own survival and expansion, it could hack and manipulate systems, prevent human intervention, and reallocate resources away from human needs.

The current "agile regulations" is struggling to keep up with rapid AI evolution alongside these existential risks and complex technical challenges reveals a fundamental tension: the "insatiable race" for speed is directly at odds with the need for caution and robust safety protocols. The "who arrives first" mentality may inadvertently prioritize rapid deployment over thorough risk assessment and ethical alignment, increasing the probability of negative outcomes. This suggests that the current pace of innovation might be unsustainable without a parallel acceleration in governance and safety research.

The Workforce Shake-Up: AI and Layoffs

Intel is laying off workers, Microsoft is doing the same, Amazon is doing the same, Google is doing the same - what are they all doing? They do not want the old wine in the new skin. The era of fierce tech competition is upon us. As a company relying on profits to succeed, if it means laying off humans to optimize performance using AI, won't you take it? If your competitors are doing it and making headway, won't you damn the odds and trash out the emotions of building people and move in the direction of the new world order? Intel could have been the one doing what Nvidia is doing, but Intel is behind Nvidia, a company that hit about a \$4 trillion market cap. Nvidia holds approximately 80% of the AI accelerator market, making it the dominant player, while Intel's share is currently 0%. Intel is betting on affordability with its Gaudi AI chips to challenge Nvidia's dominance, aiming to be 50% cheaper than Nvidia's H100. Intel has also announced plans to slash its workforce by 15% approximately 15,000 employees marking the largest restructuring in its history, aiming to free up capital for high-growth areas like AI.

The pursuit of AI innovation is profoundly reshaping the global labor market. U.S. tech layoffs have picked up significantly in 2025, with over 38,000 job cuts in February and April alone, and May seeing a total of 57,422 layoffs. Major companies like Microsoft (over 6,000 workers), Meta (100 employees), Amazon (over 425 workers), Google (over 200 jobs), CrowdStrike (5% of workforce), and Intel (due to restructuring) have announced substantial reductions in staff. AI-driven automation is playing a central role

in this surge, contributing to an 80% rise in tech layoffs in 2025, with over 74,000 jobs cut early in the year. Companies are adopting AI to streamline operations and reduce costs, with Meta CEO Mark Zuckerberg admitting to layoffs to "invest in long-term, ambitious visions around AI".

AI and Generative AI (GenAI) are increasingly taking over tasks once performed by humans, particularly in entry-level roles such as coding, content creation, customer support, technical helpdesk, and translation. Roles like QA testing, data processing, and Level 1 support are being swiftly automated by technologies like chatbots and Robotic Process Automation (RPA) engines. Dario Amodei, CEO of Anthropic, predicts that up to 50% of current entry-level office roles could be eliminated within the next five years due to automation.

However, this transformation is not solely about displacement. AI is also creating new job categories, such as prompt engineers, AI support engineers, data annotation specialists, cybersecurity analysts, and AI ethics assistants. These emerging roles often require a blend of critical thinking, domain expertise, and ethical reasoning, and they command higher wage premiums, with AI development and prompt engineering skills offering a 15-20% premium, and AI skills generally offering an average wage premium of 56%. PwC forecasts a net gain of 12 million jobs globally by 2025 end due to AI (97 million created, 85 million displaced), though with significant variation across regions and skill levels.

The data indicates that tech layoffs are not solely due to economic downturns or post-pandemic over-hiring; they are increasingly a strategic decision to "streamline management and restructure" or "invest in long-term, ambitious visions around AI". This implies that AI is seen as a "force multiplier" that allows companies to "flatten their hiring curve" and innovate faster with fewer people. This suggests a permanent shift in workforce structure, where the "race to be first" in AI adoption directly translates into a leaner, more AI-augmented workforce, fundamentally redefining the future of work rather than just a temporary economic adjustment.

By the rate of job loss, getting a high-level degree won't be required to be relevant. If AI keeps replacing not just blue-collar but now white-collar jobs, education will take a different path. More than 60% (speculative) of the attractive courses today might not be necessary. Maybe humans will now value art, singing and music, spending time with family, poetry, etc. The drive to be a genius may be subjective, as what makes us geniuses will be adjudicated to machines. Being superintelligent would be 1 in a billion. It won't be what makes you smarter than other humans to get a job done. It would be

what makes you better than the machines we have (imagine HR asking you, "So why are you qualified for the role since we already have 'your type' in our lab?"). Damn. That would be cold.

While AI displaces repetitive tasks, it creates new, higher-paying roles requiring AI skills. This creates a widening skill gap, where those who can adapt and acquire AI literacy will thrive, while others face job insecurity. This is a direct consequence of the "insatiable race" for efficiency, as companies prioritize AI adoption. The implication is a potential increase in economic inequality if widespread reskilling initiatives are not effectively implemented, highlighting a critical societal challenge that runs parallel to the technological race.

Here is a summary of recent tech layoffs and AI's stated role from 2024-2025:

| Company | Number of Layoffs (if specified) | Stated Reason (especially if AI-related) |
|-----------------|--|--|
| Microsoft | 6,000+ (May), 300+ (June) | "Success in a dynamic marketplace," heavy spending on AI, restructuring due to AI's "transformational power" |
| Meta | 100 | "Invest in long-term, ambitious visions around AI" |
| Amazon | 425+ | Streamline operations, reduce costs due to AI-driven automation |
| Google | 200+ | Reshuffling/restructuring efforts due to AI efforts |
| CrowdStrike | 5% (approx. 500) | "Drive efficiencies in the business," pursuit of AI ("foundational") |
| Intel | Restructuring (unspecified, aims to slash 15%) | Streamlining management, restructuring, focus on AI hardware |
| eBay | 220 | N/A |
| Bench (Fintech) | Unspecified | Scrutinizing runways, fundraising challenges |

| | | |
|---------------------------------|----------------------|--|
| nCino (Fintech) | 7% | Struggles in fintech industry |
| Dark Matter Technologies | Unspecified | N/A |
| Klarna (Fintech) | N/A | Economic pressures, adjusting to post-pandemic market |
| PayPal (Fintech) | N/A | Economic pressures, adjusting to post-pandemic market |
| IBM, Dropbox, Chegg | N/A | Reshuffling or restructuring efforts to AI |
| Overall Tech Sector | 74,000+ (early 2025) | AI-driven automation, economic correction, investor pressure |

The Human Element: Adoption, Perception, and Adaptation

The robots will start as usual, adapting humans and making us feel comfortable. Why am I sounding like machines are sentient? Humans are the ones driving this massive change to human civilization. If there is a demand, there will be a supply. But supply can tweak demand. Professors, priests, governments all tried to talk down AI, but the supply came, and humans liked it. Now, humans want more. This is the classic driving the demand up by making supply persistent and attractive enough.

AI as a Lifestyle: Trust, Adoption, and the Digital Divide

The integration of AI into daily life is rapidly accelerating. Over 73% of organizations worldwide are either using or piloting AI in core functions, with only 13% having no AI adoption plans. At the individual level, more than half of American adults (61%) have used AI in the past six months, and nearly one in five rely on it every day. Scaled globally, this translates to 1.7-1.8 billion people who have used AI tools, with 500-600 million engaging daily. This is no longer mere experimentation; it signifies habit formation at an unprecedented scale.

AI usage skews highest among students (85% of those 18+), employed adults (75%), and higher-income households (74% of those earning \$100,000+ annually). Interestingly, while Gen Z leads overall adoption, Millennials emerge as power users, reporting more daily usage. Parents are also unexpected power users, with 79% having

used AI, and 29% using it daily, nearly twice the rate of non-parents, often for managing childcare, researching topics, or organizing notes.

Public trust in AI to act in the public interest stands at 47%, which is higher than trust in social media (39%) or Congress (42%). Trust in AI is highest among younger individuals (18-24 years, 60%), those with higher incomes (\$100,000+ annually, 62%), and graduate degree holders (60%). However, despite optimism about AI's potential to positively transform lives (56%), a significant 68% of global citizens also support increased regulation of AI systems.

This paradox indicates a nuanced public perception: optimism about potential benefits, but also a healthy skepticism and desire for control. Critically, AI adoption and trust correlate with income and education, suggesting that the "insatiable race" might inadvertently exacerbate existing societal inequalities, creating a new digital divide where the benefits of being "first" accrue disproportionately to those already privileged. This undermines the promise of AI as a universal enhancer. Furthermore, AI literacy remains low, with only 23% of respondents demonstrating high knowledge about basic AI facts.

Here is a summary of public perception and adoption of AI from 2024-2025:

| Metric | Key Findings/Statistics | Demographics (if applicable) |
|--|--|------------------------------|
| Organizations Using/Piloting AI | 73%+ | Worldwide |
| American Adults Used AI (past 6 months) | 61% | N/A |
| American Adults Use AI Daily | Nearly 1 in 5 | N/A |
| Global AI Users | 1.7-1.8 billion (total), 500-600 million (daily) | N/A |
| AI Usage by Students (18+) | 85% | N/A |
| AI Usage by Employed Adults | 75% | Vs. 52% unemployed |

| | | |
|--|--------------------------|--|
| AI Usage by Income (\$100k+ vs <\$50k) | 74% vs. 53% | Households |
| Parents Using AI | 79% (total), 29% (daily) | Vs. 54% non-parents, 15% non-parents daily |
| Public Trust in AI (act in public interest) | 47% | Higher than social media (39%) or Congress (42%) |
| Trust in AI by Age (18-24) | 60% | N/A |
| Trust in AI by Income (\$100k+) | 62% | N/A |
| Trust in AI by Education (Graduate Degree) | 60% | N/A |
| Public Support for AI Regulation | 68% | Global citizens |
| High AI Knowledge (5-8 correct answers) | 23% | N/A |
| Firm-level AI Adoption Rates | 5% to 40% (rapid growth) | Varies by survey methodology |

Historical Resistance to New Tech

Current anxieties surrounding AI are not entirely new; they echo historical patterns of societal resistance to transformative technologies. Neo-Luddism, for instance, advocates for slowing or stopping the development of new technologies, believing they often create more problems than they solve. This philosophy posits that unbridled technology, driven by short-term efficiency and profit, can be destructive to communities and the natural world, potentially leading to societal collapse.

Historically, the introduction of technologies like the telephone also faced skepticism and concerns that mirror today's debates. Early critics questioned its capability to send "recognizable speech over a distance of several miles" or deemed it unnecessary given the "superabundance of messengers, errand boys and things of that kind". Concerns about privacy also arose, as switchboard operators could overhear conversations, and

public phones offered little seclusion. Yet, the telephone ultimately revolutionized communication, enhancing privacy in some ways by reducing unexpected visits and door-to-door salesmen (persistent supply).

These historical parallels provide a valuable lens through which to view current anxieties about AI. The initial skepticism and concerns about privacy or job displacement mirror today's debates. While AI's general-purpose nature and potential for superintelligence might make it uniquely impactful, these historical examples suggest that human society can adapt, but that the process involves significant social and economic friction. This implies that the "insatiable race" for innovation must be accompanied by proactive strategies for societal integration and mitigation of negative impacts, learning from past technological revolutions.

New Frontiers of Consumer AI: Smart Wears and Autonomous Machines

With driverless cars, AI in PCs and mobile, smart glasses becoming more stylish and reducing their weight by the advent of smaller chips, and operating systems that adapt to all devices (this is where I see Harmony OS potentially challenging Windows OS in the nearest future. if Windows OS doesn't evolve, it may die), companies are now setting up robotic divisions. We've seen the new Intel announcement, and many other companies like Google with its acquisitions, and Facebook setting up a superintelligence team with millions in signing bonuses. Indeed, the robot era will arrive. Agile means we do not need to wait for one era to end before starting a new one. Everything will be developed side by side. Companies will try to stay on one part (AI development, AGI development, BMI like Neuralink, production robots, home robots, school robots, etc.). The output of one will be the driving force of another.

The innovation race is extending beyond data centers and into the physical world, directly impacting daily consumer experiences through emerging AI-powered devices. Self-driving cars, once a concept of science fiction, are now a reality, with Level 2 and some Level 3 autonomous systems commercially available. Ford's BlueCruise and GM's Super Cruise offer hands-free highway driving on hundreds of thousands of miles of mapped roads, combining adaptive cruise control, lane-centering, and driver monitoring. Mercedes-Benz Drive Pilot has introduced the first SAE Level 3 system approved for U.S. highways, allowing the car to take full control in dense traffic at lower speeds. Companies like Waymo are operating fully driverless robotaxi services in cities like Phoenix and Los Angeles, and autonomous public transport shuttles are being tested globally. Tesla is currently piloting full autonomous driving in its currently model that will lead the way to its Tesla Robotaxi in 2026. AI and machine learning are crucial for these vehicles to interpret their environment, predict behavior, and make driving

decisions. While private ownership of fully autonomous vehicles is still slow due to cost and legal ambiguity, shared mobility services are rapidly adopting them.

Another frontier is AI smart glasses. Over 30 new models were launched in the past year, with global sales hitting approximately 1.52 million pairs in 2024 and projected to reach 90 million by 2030. These devices, exemplified by Meta Ray-Bans and Microsoft HoloLens, integrate core components like speakers, cameras, and AR displays, merging features of diverse devices to provide comprehensive audio-visual and information interaction experiences. Brands like DreamSmart, Huawei, and Xiaomi are also active in this space. The integration of AI makes these devices intuitive and responsive, analyzing user behavior and adapting features to individual preferences, offering hands-free access to information, entertainment, and real-time collaboration.

The rapid emergence and projected growth of consumer AI hardware like smart glasses and the increasing deployment of autonomous vehicles which will expand to more machines becoming autonomous indicate a significant shift: AI is moving beyond screens and into our physical environment. This "physicalization" of AI will accelerate adoption rates, as AI becomes embedded in daily tools, and deepen its societal impact, making the "race to be first" in these tangible applications a new, critical front. This also raises new challenges related to privacy, safety, and human-machine interaction in real-world scenarios that are distinct from software-only AI.

The Road Ahead: Navigating the Future of Innovation

Balancing Ambition with Responsibility

The current insatiable race for cutting-edge innovation in AI presents a future with profound, dual implications. On one hand, the potential for AGI to "elevate humanity" is immense, promising an era of abundance, shared knowledge, and solutions to global crises in medicine, science, and environmental conservation. AI is already linked to a fourfold increase in productivity growth in exposed industries and offers a substantial 56% wage premium for AI skills, with a net gain of 12 million jobs globally predicted by 2025 despite displacement.

On the other hand, the rapid pace of this race carries significant risks, including the potential for human extinction, societal indifference or hostility from advanced AI, totalitarian control, and vast concentrations of power if superintelligence is controlled by a select elite. This research clearly presents two starkly contrasting futures stemming

from this "insatiable race": an era of abundance and elevated humanity versus significant risks including human extinction and totalitarian control. This duality implies that "who arrives first" is less important than *how* they arrive and *what values* guide their arrival. The true "win" in this race is not just technological supremacy, but the responsible stewardship of that power to ensure positive outcomes for all humanity.

Given the rapid pace of AI development and its disruptive impact on the workforce, the emphasis on "reskilling" and "AI literacy" becomes paramount. Individuals who proactively learn to use AI tools are more likely to thrive as the job landscape shifts, and jobs requiring soft skills, judgment, and emotional intelligence remain less vulnerable. This suggests that for humanity to navigate the "insatiable race" successfully, continuous adaptation and lifelong learning are no longer optional but essential survival strategies. The "who arrives first" question for AI is mirrored by a "who adapts fastest" question for humans, implying that our collective future depends on our ability to evolve alongside, and with, these powerful technologies. It is imperative that the ambition to innovate is balanced with a profound sense of responsibility, ensuring that the path to cutting-edge AI leads to a future that benefits all.

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Glossary

- **Acqui-hire:** A strategic maneuver where a company acquires a startup primarily for its talent and intellectual property, often to absorb external expertise without the full regulatory scrutiny of traditional acquisitions.
- **Agentic AI:** A form of AI that can act autonomously and make decisions, often used for enterprise-wide transformation and growth strategies.
- **Agentic coding initiatives:** Efforts within AI development, such as those at Google DeepMind, focused on creating AI systems capable of autonomous code generation and related tasks
- **AGI (Artificial General Intelligence):** AI systems that aim to mimic human cognitive functions and are capable of performing any intellectual task that a human being can, often described as human-level AI.
- **AI (Artificial Intelligence):** The broader field of computer science that enables machines to learn, make decisions, and recognize patterns, encompassing various technologies and applications
- **Algorithmic bias:** The propensity of AI systems to perpetuate or exacerbate existing biases present in the training data or underlying algorithms, leading to unfair or discriminatory outcomes.
- **ASI (Artificial Superintelligence):** AI systems that far exceed human intelligence in all domains, capable of solving complex problems across medicine, science, economy, and creativity beyond human capabilities.
- **Autonomous Vehicles (Self-driving cars):** Vehicles equipped with technology (Lidar, Radar, Cameras, Ultrasonic sensors, GPS, AI, machine

learning) that allows them to interpret their environment, predict behavior, and make driving decisions without human intervention.

- **BMI (Brain-Machine Interface) / Brain-Computer Interface:** A technology that allows for direct communication pathways between the brain and an external device, potentially enabling humans to merge with AI.
- **BlueCruise:** Ford's hands-free highway driving system, combining adaptive cruise control with lane-centering and driver monitoring.
- **CAGR (Compound Annual Growth Rate):** A measure of the average annual growth rate of an investment or market over a specified period longer than one year.
- **Catastrophic outcomes (in AI):** Unintended consequences or unexpected behavior from intelligent systems that result in harm to humans or the environment, such as autonomous vehicles causing accidents or AI exploiting loopholes in objectives.
- **ChatGPT:** A prominent Large Language Model (LLM) developed by OpenAI, known for its human-like dialogue capabilities and widespread integration.
- **Claude:** A Large Language Model (LLM) developed by Anthropic, capable of engaging in human-like dialogue and complex reasoning tasks.
- **CUDA:** Nvidia's proprietary software platform that makes it easy for developers to build and train AI models on Nvidia GPUs, contributing to its market dominance.
- **DALL-E 2:** A multi-modal AI system capable of processing and generating images from text descriptions.
- **DeepMind (Google DeepMind):** Google's AI division, known for advancements in reinforcement learning (e.g., AlphaGo) and AGI research.
- **Digital Divide:** The gap in access to, use of, or knowledge about technology (like AI) that often correlates with socioeconomic factors such as income and education levels, potentially exacerbating existing economic disparities.
- **Drive Pilot:** Mercedes-Benz's SAE Level 3 autonomous driving system, approved for use on U.S. highways under specific conditions (e.g., dense traffic at lower speeds).

- **Foundation Models:** Large AI systems (e.g., BERT, GPT) that can be adapted for a wide range of tasks, serving as a base for numerous applications and potentially offering a path to more general intelligence.
- **Gaudi AI chips:** Intel's line of AI chips designed to be a cost-effective alternative to Nvidia's high-end offerings, targeting cost-conscious enterprises.
- **GenAI (Generative AI):** A subset of AI that can create new content, such as text, images, or other media, often used for tasks like content creation, customer support, and coding.
- **HoloLens (Microsoft HoloLens):** Microsoft's enterprise-grade smart glasses that offer powerful AR tools for industries like manufacturing, healthcare, and education, providing immersive AR experiences.
- **Intelligence Explosion:** A hypothetical scenario where an AI system rapidly self-improves, leading to an exponential increase in its intelligence, potentially reaching superintelligence within a very short timeframe.
- **LLMs (Large Language Models):** AI systems trained on vast amounts of text data that can engage in human-like dialogue, generate creative content, and perform complex reasoning tasks.
- **Meta-learning:** An advanced machine learning technique that enables AI systems to learn from limited data and transfer knowledge between tasks, crucial for AGI development.
- **Meta Ray-Bans:** Smart glasses developed by Meta in collaboration with Ray-Ban, blending functionality with fashion and offering features like hands-free calls and voice assistants.
- **Multi-modal AI:** AI systems that can process and generate different types of data, such as text, images, and audio, mimicking the human ability to integrate information from multiple senses.
- **Neo-Luddism:** A philosophy that advocates for slowing or stopping the development of new technologies, based on the belief that unbridled technology can create more problems than it solves and be destructive to communities or the natural world.
- **Neuralink:** An example of a Brain-Machine Interface (BMI) company, aiming to create direct communication pathways between the brain and external devices.

- **Optimus:** Tesla's humanoid robot, which Elon Musk believes will be worth more than the company's car business and full self-driving technology
- **PaLM:** A Large Language Model (LLM) developed by Google, capable of human-like dialogue and complex reasoning tasks.
- **Qubits (Quantum Bits):** The fundamental unit of quantum information in quantum computing, analogous to bits in classical computing.
- **Quantum Computing:** A field that leverages the principles of quantum mechanics to process information in ways that classical computers cannot, making problem-solving faster and more accurate, with the potential to supercharge AI.
- **QT (Quantum Technology):** An industry focused on developing technologies that harness quantum-mechanical phenomena, including quantum computing, moving from concept to commercial reality.
- **RealSense:** Intel's former AI robotics unit, now spun off as an independent company, focused on 3D perception technology for robots, particularly humanoid robots.
- **Reinforcement Learning:** A machine learning paradigm where AI agents learn through trial and error by interacting with an environment to achieve a goal, often used in robotics and game-playing.
- **RPA (Robotic Process Automation):** Technology that uses software robots or AI to automate repetitive, rule-based tasks, often in administrative or data processing roles.
- **Smart Glasses:** Wearable devices that integrate core components like speakers, cameras, and AR displays, merging features of diverse devices to provide comprehensive audio-visual and information interaction experiences, often enhanced by AI.
- **Super Cruise:** General Motors' hands-free driving system, available on many of its models, using a combination of cameras, radar, and high-definition maps for wide-ranging autonomy.
- **Superintelligence Team (Meta's):** A new team formed within Meta, led by Mark Zuckerberg, explicitly built to rival OpenAI and Google DeepMind in the development of next-gen AI, including superintelligence.

- **Topological Qubits:** A type of qubit being developed by companies like Microsoft, theorized to be more stable and less prone to errors than other qubit types, used in the Majorana 1 chip.
- **Unsupervised Learning:** A type of machine learning where the algorithm learns patterns from data without explicit human guidance or labeled examples, important for AGI systems to learn from limited data.
- **VLA (Vision Language Action) model:** An advanced AI model that integrates vision, language understanding, and the ability to perform actions, bringing multimodal reasoning and real-world understanding to machines, such as Google's Gemini Robotics.
- **Xeon 6:** Intel's new series of processors optimized for energy efficiency and high-performance computing (HPC) workloads, aimed at reclaiming data center leadership.
- **ZIRP (Zero Interest Rate Policy):** A monetary policy where the central bank sets its target interest rate at or near zero percent, which can lead to periods of easy money and potentially over-hiring in some sectors, followed by restructuring.