Unraveling the Impact of Artificial Intelligence on Human Society: A Multidisciplinary Exploration

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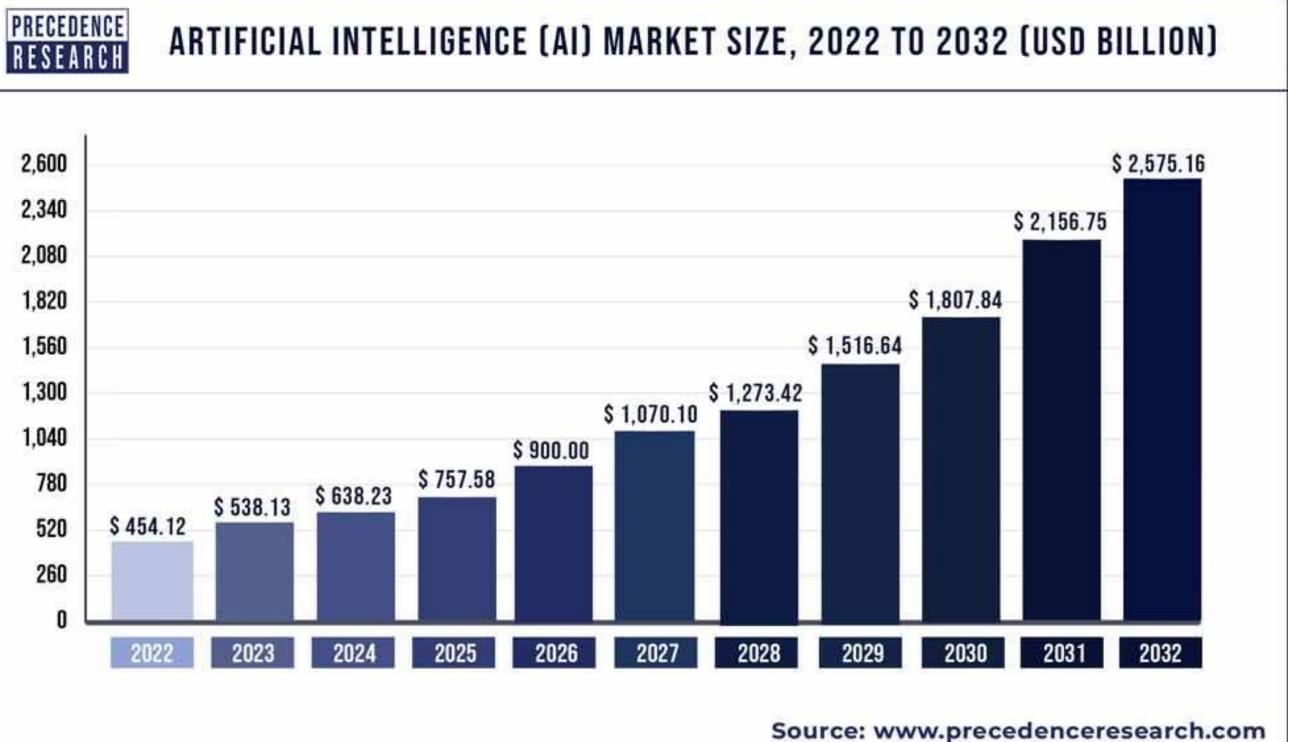
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Abstract:

Integrating Artificial Intelligence (AI) into human society drives revolutionary change, necessitating a finer understanding of its impact across many disciplines and drawing insights from sociology, anthropology, and the seminal work from various authors.

Exploring the measurement of AI's impact on human society, this presentation additionally displays its effects on social media dynamics, human cognition, and societal evolution. The comparison of Human Intelligence with Artificial Intelligence elucidates the complex relationship between technological advancement and human cognition, questioning whether AI uplifts or diminishes human intelligence. Furthermore, the presentation contemplates the ethical dimensions of AI adoption in today's job market, determining the need for human intuition and labor with AI systems. While acknowledging AI's capacity to streamline decision-making processes, it underscores the irreplaceable role of human agency in ethical decision-making.

AI Structure and Capabilities:

- AI is a general phrase that covers a broad spectrum of technologies that simulate human intellect in one manner or another. This can entail seeing trends, drawing lessons from past mistakes, forecasting the future, and even comprehending spoken language. However, AI needs to be trained to learn from its experiences, unlike humans who do it automatically. We refer to this procedure as machine learning.

- The most popular forms of AI are Large Language Models (LLM); large deep learning models pre-trained on substantial amounts of data. Company OpenAI implemented this for ChatGPT. Training the LLM consists of Transformer Architecture, Tokens, Context Windows, etc.

- These LLMs are changing business through potential job displacement, quality, and skilling and learning, with additional predictions on the economic sector.

Does AI pose an existential threat?

"It is important not to anthropomorphize superintelligence when thinking about its potential impacts. Anthropomorphic frames encourage unfounded expectations about the growth trajectory of a seed AI and about the psychology, motivations, and capabilities of a mature superintelligence." - Nick Bostrom, Superintelligence, p. 92.

- We advise that when we think about the potential effects of superintelligent AI, we shouldn't assume it will act or think like a human. Doing so can lead us to have inaccurate expectations about how an AI might develop from its initial stages and what it might be capable of or 'want' to do once it achieves a high level of intelligence. The tool is only as sharp as its creator. AI is smart, precise, and factual, though lacks social savvy. It is primarily logical but not intuitive and creative. This idea probably originates in observation: we look at present-day computers and see that they are good at calculation, remembering facts, and following the letter of instructions while being unconscious to social contexts and subtexts, norms, emotions, and politics

Findings:

- **Dependence on AI** - A potential drawback from human's constant AI usage is heavy reliance which reduces problem-solving over time. According to a study by Penn State, 77% said that society as a whole relied too much on technology to succeed. This omnipresent feeling is real and has led to a major loss in skills. As a society we are experiencing "digital amnesia", delegating all information that would once require immense brain power to remember to a smart phone with relatively infinite memory storage. Memories, events, words, names, numbers and nitty gritty details have freed up all this space in our brains to remember more things, one would expect, yet we do the opposite by binging shows and allowing AI to do increasingly more work for us.

- **Deepfakes** – Voice cloning methods, using eleven labs, have been used to mimic voices of loved ones, collected on social media, and extort money from vulnerable family members. Entire music albums have been written, produced and put out to the public using a famous artist's voice. Deepfakes have gone as far as videos unrecognizably mimicking body language of celebreties and having them say or do anything. An entire porn categorie of deepfakes has now surfaced as celebrities have no ability to stop or take down online websites that keep popping up. We have officially entered the age of misinformation warfare.

- **Autonomous weapons** – Technology is becoming cheaper and user friendly allowing virtually anybody with basic resources to have access to weaponize powerful tools. Not to give any ideas, but its as simple as an informed kid with laissez-faire parents buying a drone, program a face recognition software, which is easily doable through online tutorials, and the drone could fly around recognizing faces and tracking specific people. This is to stress the fact that not only militarized high grade automated weapons are a threat. Everyday unsuspecting citizens could contribute to the overall issue.

- **Social Surveillance** – CCTV has taken a quantum leap thanks to innovations in computer vision and analytics with affordable high-definition IP cameras. AI can now track patterns, detect threats and limit human error. It doesn't just stop at crime surveillance and threat response. Retail Stores could track foot traffic and customer habits to optimize the store layout and improve customer's in store experience and satisfaction. At healthcare facilities, AI vision could help enforce strict hygiene standards and even detect when patients are in destress and panicked. In the transportation sector, AI powered video cameras could seamlessly control the flow of traffic so as to never have annoying congestions. Lastly, it could be of great aid to schools when used to track attendance or more importantly detect school threats (gun violence). This is only a short list of how AI powered public video cameras could impact society.

- Lack of transparency – There are two sides to AI transparency. Firstly is the average user's comprehension of AI. According to the Zendesk CX trend reports 2024, 75% of organizations believe that a lack of transparency eventually leads to customer distrust in AI. This is prevented through 3 criterias: Explainability, why did the AI make such and such decisions, Interpretability, while the first criteria explains only the output interpretability explains to humans the relationship between the input and the output (how the AI model works), Accountability, making sure the AI is held accountable for its decisions and actions. On the other side, to most programmers, AI has become a black box. "We built it, we trained it, but we don't know what it's doing." For these neural networks like chat GPT, look under the hood and all you find is millions of numbers impossible to decipher.

- Socioeconomic inequalities – As countries who have access to highly developed AI become more efficient and productive, the gap between the first and second world will widen. This will only strain the socioeconomic inequalities to an unprecedented extent on the micro and macro level.

Diminishing Labor Market?

From textile workers in the 1900s replaced by steam powered machines to 20th century car manufacturing shifting from human assembly line tasks to cars made head-to-toe by robots. Automation is the slow forward marching curtain that is swallowing every entry-level job and even complex labor work. In 2023, technology replaced 37% of workers and according to a recent report of 750 business leaders using AI from ResumeBuilder, 44% expect the layoffs due to AI to escalate. This recent pandemic was a catalyst for the process of mechanization. The labor market is not the only sector in precarity. The creative market, valued at $14 billion / year, is being threatened by content generators such as chat GPT 4.0 (DALL-E), leonardo.ai, midjourney, sora and new AI applications developing everyday. Many AIs have already been implemented by designers, filmmakers, and advertising execs since the user interface is friendlier to non-tech savvy workers. It is unsure at the moment exactly how AI will shift the landscape of the job markets, from intellectual work to hard labor. One thing is certain, there will be an evolution taking place. Diversification of skillsets and flexibility will be the name of the game.

ARTIFICIAL INTELLIGENCE (AI) MARKET SIZE, 2022 TO 2032 (USD BILLION)

Source: www.precedenceresearch.com

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