Comprehensive review of Artificial General Intelligence (AGI): Applications in Business and Finance

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ABSTRACT: This paper delves into the multifaceted realm of Artificial General Intelligence (AGI), exploring its definition, evolution, potential applications, and the ongoing debates surrounding its development. We examine AGI's theoretical underpinnings, contrasting it with narrow AI and artificial superintelligence (ASI). Furthermore, we discuss the impact of AGI across various sectors, including finance, research, and business, while also addressing the ethical considerations and challenges associated with its advancement. This survey synthesizes current research and perspectives, providing a comprehensive overview of AGI's trajectory and its potential to reshape the future.

This paper presents a comprehensive examination of Artificial General Intelligence (AGI), analyzing its current state, applications across industries, and future trajectory. Through systematic review of academic literature and industry reports, we identify three critical dimensions of AGI development: (1) technical architectures bridging narrow AI to general intelligence, (2) transformative applications in finance and business, and (3) emerging ethical and workforce challenges. Our findings reveal accelerating market growth (projected 36.9% CAGR through 2031) alongside significant research gaps in evaluation metrics, environmental impact, and cross-cultural adoption. The study highlights AGI's dual role as both disruptor and enabler, with financial services emerging as the leading adoption sector (38% of investments by 2028). We summarize (based on cited work) a framework for responsible AGI development that balances innovation with ethical considerations, emphasizing the need for standardized benchmarks and workforce transition strategies. The paper contributes to ongoing discourse by synthesizing dispersed research into actionable insights for practitioners and policymakers navigating the AGI revolution. This is a pure review paper and all results and findings are form cited literature.

I. INTRODUCTION

Artificial Intelligence (AI) has rapidly transformed numerous aspects of modern life, from automation to personalized recommendations. However, the current state of AI is largely characterized by narrow or weak AI, designed for specific tasks. The pursuit of Artificial General Intelligence (AGI), which aims to create AI with human-level cognitive abilities, remains a central goal in the field. This paper provides an overview of AGI, its potential, and the challenges in its development.

The concept of AGI has captured the imagination of researchers, technologists, and the public alike. AGI is envisioned as a system capable of understanding, learning, and applying knowledge across a wide range of domains, much like a human. This capability distinguishes it from narrow AI, which excels only in the tasks it is specifically programmed for. The realization of AGI promises to revolutionize industries, redefine human-machine interaction, and potentially address some of humanity's most pressing challenges.

Artificial General Intelligence (AGI) represents a paradigm shift in machine capabilities [1], [2]. Unlike narrow AI systems, AGI aims to replicate human-level adaptability [3]. Recent estimates suggest the AGI market could grow at 36.9% CAGR [4]. Artificial General Intelligence (AGI) has emerged as a transformative technology with the potential to revolutionize numerous industries [5]. Unlike narrow AI systems designed for specific tasks, AGI aims to replicate human-level intelligence across multiple domains [6]. The concept of AGI has gained significant attention in recent years, with debates ranging from its technical feasibility to its societal impact [7]. Key works

define AGI as systems demonstrating human-like reasoning across domains [5], [8]. Current research focuses on overcoming technical barriers to generalized learning [9].

Recent advancements in machine learning and neural networks have accelerated progress toward AGI [2]. While some experts argue that AGI is already here in primitive forms [2], others maintain that true AGI remains years or decades away [10]. The financial sector has been particularly active in exploring AGI applications, recognizing its potential to transform market analysis, trading strategies, and risk management [11].

II. COMPREHENSIVE LITERATURE REVIEW

The discourse surrounding Artificial General Intelligence (AGI) encompasses a broad spectrum of perspectives, from technical architectures to societal implications. While AGI promises transformative potential [12], significant hurdles remain in ethical implementation [7]. The path from narrow AI to AGI requires solving fundamental challenges in transfer learning [13].This is a buildup from our previous work [59-73].

A) The Development and Current State of AGI

The development of AGI is a complex and challenging endeavor. It requires advancements in various fields, including machine learning, cognitive science, neuroscience, and computer science. Researchers are exploring different approaches to achieve AGI, such as:

*   **Symbolic AI:** This approach focuses on representing knowledge using symbols and rules, enabling reasoning and problem-solving.
*   **Connectionist AI:** This approach uses artificial neural networks to learn from data, inspired by the structure of the human brain.
*   **Hybrid Approaches:** Combining symbolic and connectionist methods to leverage the strengths of both.

Despite significant progress in AI, true AGI remains elusive. Some researchers believe that current AI models, while impressive, are still far from achieving general intelligence [2], while others are more optimistic about near-term advancements [10]. The debate about when and if AGI will be achieved is ongoing, with varying predictions and perspectives [14], [15].

B) Theoretical Foundations

The conceptual framework of AGI builds upon decades of AI research, with [16] providing a foundational definition of AGI as systems exhibiting human-like adaptability. This contrasts sharply with narrow AI systems documented by [17]. The theoretical progression toward AGI involves multiple paradigms, including symbolic approaches highlighted in [18] and connectionist methods analyzed by [19]. Hybrid architectures combining these approaches, as proposed by [20], appear particularly promising for achieving general intelligence.

C) Technical Implementations

Current AGI prototypes demonstrate varying degrees of generalizability. [21] examines cognitive architectures attempting to replicate human reasoning patterns, while [22] provides a comprehensive taxonomy of AGI development approaches. The role of large language models in AGI development remains contested, with [14] arguing for application-driven progress rather than pure LLM scaling. Emerging frameworks like those described in [23] emphasize the importance of ethical constraints in AGI system design.

D) Commercial Landscape

The AGI market shows remarkable growth potential, with [4] projecting a 36.9% CAGR through 2031. Investment patterns reveal sector-specific priorities, with [24] detailing corporate strategies in AGI adoption. Financial applications dominate early use cases, as evidenced by [25] and [26], which document institutional deployments in portfolio management and risk assessment. However, [27] cautions against over-optimism, noting the marketing potential of AGI claims in investment circles.

E) Societal Implications

The broader impacts of AGI development spark vigorous debate. [7] presents competing narratives of AGI's societal consequences, while [28] analyzes geopolitical dimensions of the AGI race. Workforce transformation emerges as a critical concern in [29], which outlines strategies for human-AI collaboration. The paradox of personalized systems, explored by [30], highlights the tension between efficiency and diversity in AGI applications.

F) Emerging Research Directions

Several underutilized sources point to novel AGI research avenues. [31] examines

developmental approaches to AGI learning, while [32] discusses interface design challenges for general intelligent systems. [33] provides a unique industry perspective on AGI commercialization timelines, complementing the academic treatment in [34]. The integration of neuroscientific principles, as suggested by [35], may offer breakthroughs in cognitive architecture design.

This synthesis reveals three critical research gaps: (1) the need for standardized AGI benchmarking metrics, (2) insufficient exploration of AGI's environmental impacts, and (3) limited cross-cultural studies of AGI acceptance. Future work should address these areas while building on the substantial foundation established by the reviewed literature.

G) AGI Market Growth Chart
Projected AGI market size from 2023 to 2032 is discussed in table 2.

Table 1: Technical Architecture of AGI Systems

Layer	Technology Name	Cloud / Compute	Mathematical Theory
Foundation Model	GPT-4, Claude 3, Gemini 1.5	Azure OpenAI, Anthropic Cloud, Google Cloud TPU	Transformer architecture, Attention Mechanism
Orchestration Layer	LangChain, AutoGen, CrewAI	AWS Lambda, Azure Functions	Finite State Machines, Graph Theory
Memory + Context Mgmt	Vector DBs (Pinecone, FAISS), LangGraph	Redis, Milvus, Weaviate	k-NN, Cosine Similarity, Information Theory
Planning + Reasoning	ReAct, Toolformer, BabyAGI	Local GPU or HPC Cluster	Reinforcement Learning, MDPs
Data Preprocessing	Apache Spark, Hugging Face Datasets	AWS Glue, Databricks	Probability Theory, Sampling
Training	PyTorch, DeepSpeed, Megatron-LM	NVIDIA DGX, TPU v5, Azure ML	Gradient Descent, Backpropagation
Evaluation	HELM, OpenEval, TruthfulQA	CloudBench, Paperswithcode	ROC/AUC, Metric Optimization
Deployment	Docker, Kubernetes, Ray Serve	AWS SageMaker GCP Vertex AI	Systems Theory, Distributed Computing

Research Gaps and Quantitative Findings are shown in table 1,2, and 3.

III. IDENTIFIED RESEARCH GAPS
Based on comprehensive analysis of the literature, we identify (based on cited work) three primary research gaps in current AGI studies:

- **Standardized Evaluation Metrics:** Current literature lacks consensus on quantitative benchmarks for AGI capabilities [36], [37]

- **Environmental Impact Studies:** Only 12% of reviewed papers address computational sustainability of AGI systems [7], [38]
- **Cross-Cultural AGI Research:** Limited empirical data exists on regional adoption differences [28], [39]

Table 2: AGI Market Growth Projections

Metric	Current Value	Projection	Source
Market Size (2023)	$2.74B	$52B by 2032	[40]
CAGR (2023–2031)	–	36.9%	[4]
Financial Sector Adoption	18% of AI projects	38% by 2028	[11], [40]
Compute Requirements	10^{25}FLOPs	10^{28}FLOPs for ASI	[41], [42]
Training Data Growth	50% YoY	75% YoY by 2026	[14]
Regulatory Frameworks	3 major initiatives	12+ expected by 2030	[43]

A) Proposed Research Directions

To address these gaps, we propose (based on cited work) in table 3.

Table: 3 Proposed Research Directions

Research Gap	Proposed Approach	Metrics
Standardized Evaluation	Development of multi-domain AGI benchmark suite	Task transferability scores
Environmental Impact	Lifecycle analysis of AGI training pipelines	CO2e per model iteration
Cross-Cultural Studies	Longitudinal survey across 10 economic regions	Adoption readiness index

These quantitative findings reveal significant opportunities for future research, particularly in establishing standardized measurement frameworks [23] and addressing the environmental costs of AGI development [7]. The projected market growth underscores the urgency of these research initiatives.

IV. DEFINING ARTIFICIAL GENERAL INTELLIGENCE

Artificial General Intelligence (AGI) is often described as AI that possesses the ability to understand, learn, and apply knowledge across a wide range of tasks, similar to human intelligence [37], [21], [6], [44]. This contrasts with narrow AI, which is designed to perform a specific task, such as image recognition or playing chess [3], [13], [17]. While narrow AI has achieved significant success in various applications, the development of AGI remains a long-term goal.

A) AGI vs. Narrow AI vs. Artificial Superintelligence

To understand AGI, it's crucial to differentiate it from other forms of AI:

- **Narrow AI:** Also known as weak AI, this type of AI is designed for specific tasks. Examples include spam filters, recommendation systems, and virtual assistants like Siri or Alexa.
- **AGI:** Also known as strong AI or human-level AI, AGI aims to replicate human-level intelligence, enabling machines to perform any intellectual task that a human being can do.
- **Artificial Superintelligence (ASI):** ASI is a hypothetical form of AI that surpasses human intelligence in all aspects, including creativity, problem-solving, and general wisdom [41], [42].

The progression from narrow AI to AGI and then to ASI represents an increasing level of intelligence and capability. While narrow AI is prevalent today, AGI and ASI remain largely theoretical, with ongoing research and debate about their feasibility and timelines.

V. POTENTIAL APPLICATIONS OF AGI

The potential applications of AGI are vast and transformative, spanning across various sectors:

A) AGI in Finance

AGI has the potential to revolutionize the financial industry by automating complex tasks, improving decision-making, and enhancing efficiency [12], [11], [45], [46], [47], [48], [49]. Potential applications include:

- **Algorithmic Trading:** AGI could analyze vast amounts of market data to predict trends and execute trades with greater accuracy and speed.
- **Risk Management:** AGI could assess and manage financial risks more effectively by identifying patterns and anomalies that human analysts might miss.
- **Personalized Financial Advice:** AGI could provide tailored financial advice to individuals based on their specific needs and goals.
- **Fraud Detection:** AGI could detect fraudulent activities with higher accuracy and efficiency.

However, the integration of AGI in finance also raises concerns about job displacement, ethical considerations, and the potential for increased market volatility.

B) AGI in Research

AGI could accelerate scientific discovery and innovation by automating research processes, analyzing complex data, and generating new hypotheses [9]. Potential applications include:

- **Drug Discovery:** AGI could analyze biological data to identify potential drug candidates and accelerate the drug development process.
- **Materials Science:** AGI could design and discover new materials with specific properties for various applications.

- **Climate Change Research:** AGI could analyze climate data to predict future trends and develop solutions to mitigate climate change.

C) AGI in Business
AGI has the potential to transform business operations across various industries [29], [50], [38]. Potential applications include:
- **Automation:** AGI could automate complex tasks, increasing efficiency and productivity.
- **Customer Service:** AGI could provide personalized and efficient customer service through advanced chatbots and virtual assistants.
- **Decision Making:** AGI could analyze data and provide insights to support better decision-making.
- **Hiring and Talent Acquisition:** AGI could assist in screening resumes and identifying suitable candidates [51].

D) Ethical Considerations and Challenges
The development and deployment of AGI raise significant ethical considerations and challenges:
- **Job Displacement:** The automation capabilities of AGI could lead to job displacement in various industries.
- **Bias and Fairness:** AGI systems could inherit biases from the data they are trained on, leading to unfair or discriminatory outcomes.
- **Safety and Control:** Ensuring the safety and control of AGI systems is crucial to prevent unintended consequences.
- **Privacy and Security:** Protecting data privacy and security is essential as AGI systems collect and process vast amounts of information.
- **Regulation and Governance:** Developing appropriate regulations and governance frameworks is necessary to guide the responsible development and deployment of AGI.

VI. AGI APPLICATIONS IN FINANCE: INVESTMENT AND RISK MANAGEMENT

The financial sector stands at the forefront of AGI adoption, particularly in investment strategies and risk management [45]. Artificial General Intelligence systems demonstrate unique capabilities in processing complex market data, identifying non-linear patterns, and adapting to dynamic financial environments [48]. AGI shows particular promise in financial markets through predictive algorithms [45], [46]. Major institutions are investing in AGI-driven trading systems [11].

A) Intelligent Investment Strategies
AGI transforms investment management through its capacity for holistic market analysis. Unlike traditional AI systems limited to specific asset classes, AGI can simultaneously evaluate equities, derivatives, commodities, and alternative investments while considering macroeconomic indicators [11]. Amazon's AGI Finance team has pioneered systems that combine generative AI with financial modeling to optimize portfolio allocations [52]. These systems demonstrate emergent capabilities in:
- Predictive market trend analysis using multi-modal data (text, audio, visual) [25]
- Dynamic asset rebalancing based on real-time geopolitical and economic developments [47]
- Identification of arbitrage opportunities across global markets [46]

B) Risk Assessment and Mitigation
AGI's general intelligence enables comprehensive risk evaluation that surpasses narrow AI approaches [3]. Financial institutions are deploying AGI prototypes for:
- Systemic risk modeling that integrates market, credit, and operational risk factors [5]
- Stress testing under multiple hypothetical scenarios with adaptive learning capabilities [15]
- Fraud detection systems that evolve with emerging financial crime patterns [29]

Notably, AGI systems show promise in predicting black swan events by identifying subtle correlations across disparate data sources that conventional models overlook [45]. The World Economic Forum highlights AGI's potential to enhance financial inclusion through improved risk assessment of underbanked populations [49].

C) Challenges inFinancial Implementation
Despite these advancements, financial AGI systems face significant hurdles:
- Explainability constraints in complex decision-making processes [41]
- Regulatory compliance in highly scrutinized financial markets [43]
- Vulnerability to adversarial attacks on financial models [44]

The integration of AGI in finance requires robust frameworks that balance innovation with stability [23]. As noted by [28], the competitive landscape in financial AGI development may accelerate adoption while potentially compromising safety standards.

D) AGI in Finance and Markets

The financial industry stands to benefit significantly from AGI adoption. AGI systems can analyze vast amounts of market data, identify complex patterns, and make predictions with unprecedented accuracy [45]. Several financial institutions have already begun experimenting with AGI prototypes for tasks such as algorithmic trading, portfolio optimization, and fraud detection [25].

Amazon's AGI Finance team, for instance, has been developing systems that combine generative AI with financial analysis capabilities [52]. These systems aim to provide more accurate forecasts and enable high-velocity decision-making in financial markets [52]. Similarly, other companies are exploring how AGI can enhance customer experiences through personalized financial recommendations [30].

The potential of AGI in finance extends beyond traditional markets. Some researchers suggest that AGI could play a crucial role in promoting financial inclusion, particularly in developing regions [49]. By analyzing alternative data sources and adapting to local contexts, AGI systems could provide financial services to previously underserved populations [49].

VII. FUTURE TRAJECTORY OF AGI DEVELOPMENT

The evolution of Artificial General Intelligence is expected to follow an exponential curve, with significant milestones projected through 2030. Current research and industry trends suggest distinct phases of advancement [15].

A) The Future of AGI

The future of AGI is uncertain, with ongoing debates about its timeline and potential impact. While some experts believe that AGI is still decades away, others predict that it could be achieved in the near future [10], [40]. The development of AGI will likely be a gradual process, with incremental advancements in AI capabilities.

The race to achieve AGI is also influenced by geopolitical factors, with countries like the US and China competing for leadership in AI development [39], [43], [28]. International collaboration and ethical considerations will be crucial to ensure that AGI is developed and used for the benefit of humanity.

B) Future Directions and Market Trends

The AGI market is projected to grow significantly in the coming years. According to market research, the AGI sector was valued at $2.74 billion in 2023 and is expected to reach $25.74 billion by 2031, representing a compound annual growth rate of 36.9% [4]. Some estimates are even more optimistic, suggesting the market could reach $52 billion by 2032 [40].

Investment in AGI research and development is increasing across both public and private sectors. Companies like OpenAI, DeepSeek, and Anthropic are pushing the boundaries of what's possible with AI systems [14]. At the same time, cloud providers such as AWS are funding research into agentic AI systems that could form components of future AGI architectures [53].

The path to AGI will likely involve integrating multiple AI approaches rather than relying solely on any single technique [23]. Hybrid systems combining neural networks, symbolic reasoning, and other paradigms may offer the most promising route to achieving general intelligence [54].

C) Near-Term Projections (2025-2026)

Early commercial AGI applications are anticipated to emerge, particularly in specialized domains:

- Hybrid AI systems combining narrow AI with proto-AGI capabilities in finance and healthcare [14]
- AWS and other cloud providers rolling out agentic AI frameworks as AGI precursors [53]
- Market growth to $25.74 billion, driven by financial sector adoption [4]

Experts predict these systems will demonstrate "islands of general intelligence" while lacking full human-like cognition [54].

D) Mid-Term Outlook (2027-2028)

The AGI landscape may witness transformative developments:

- First true AGI prototypes achieving human-level performance on limited tasks [2]
- Widespread deployment in algorithmic trading and risk management [45]
- Emergence of AGI governance frameworks as technology matures [41]

The financial sector is projected to account for 38% of AGI investments during this period [40].

E) Long-Term Horizon (2029-2030)

By decade's end, AGI may reach critical milestones:

- Market valuation exceeding $52 billion with CAGR of 36.9% [40]
- Potential achievement of Artificial Superintelligence (ASI) in controlled environments [42]

- Full integration of AGI in financial decision-making across institutional investors [47]

However, significant challenges remain in areas of:
- Ethical implementation [7]
- Geopolitical competition between US and China [28]
- Workforce displacement concerns [5]

F) The 2030 Benchmark
Projections suggest 2030 as a potential inflection point where:
- AGI systems may demonstrate meta-learning capabilities [34]
- Financial markets could begin pricing AGI breakthroughs in real-time [47]
- Regulatory frameworks reach maturity to govern advanced AGI applications [43]

The transition from narrow AI to true AGI will likely be gradual rather than abrupt [55], with financial institutions serving as early adopters [50].

VIII. EMPLOYMENT LANDSCAPE AND SKILL REQUIREMENTS IN AGI
The emergence of Artificial General Intelligence is creating new employment paradigms while transforming existing job markets. This section analyzes current trends and projected requirements based on industry reports and academic literature.

A) Emerging AGI Job Roles
The AGI sector is generating demand for hybrid roles combining technical and domain expertise:
- **AGI Finance Specialists:** Bridging financial analysis with AI systems, as seen in Amazon's AGI Finance team [25], [52]
- **AI Alignment Researchers:** Ensuring AGI systems remain beneficial and controllable [7], [41]
- **Multimodal Data Engineers:** Processing diverse data types for AGI training [45], [46]
- **AGI Policy Analysts:** Developing governance frameworks [28], [43]

B) Core Skill Requirements
Analysis of job postings and industry reports reveals five critical skill clusters as shown table 5.

Table 5 AGI-Related Skills and Their Prevalence

Skill Category	Demand Level	Key References
Machine Learning Fundamentals	High (87% of roles)	[1], [56]
Cross-Domain Reasoning	Medium (growing)	[3], [13]
Ethical AI Development	Increasing	[7], [23]
Financial Modeling	Sector-Specific	[11], [48]
Human-AI Collaboration	Emerging	[29], [51]

C) Workforce Transformation Trends
The AGI revolution is reshaping employment in three key ways:
- **Upskilling Imperative:** 64% of financial institutions report AGI-specific training programs [25], [49]
- **New Credentialing:** Emergence of AGI-focused certifications and degrees [56], [57]
- **Job Polarization:** High-skilled roles growing while middle-skill positions automate [5], [29]

D) Strategic Recommendations
For workforce development in the AGI era:
- Integrate AGI concepts into business education [50]
- Develop hybrid technical-domain training programs [52]
- Prioritize ethical AI competencies across curricula [44]
- Foster public-private partnerships for reskilling [49]

The employment landscape underscores AGI's dual nature as both disruptor and creator of opportunity [5]. Proactive skill development will be crucial for workforce readiness [56].

IX. CHALLENGES AND ETHICAL CONSIDERATIONS
Despite its promise, AGI development faces significant technical and ethical challenges. One major concern is the alignment problem—ensuring that AGI systems' objectives remain aligned with human values [41]. There are also debates about whether current approaches, such as large language models (LLMs), can lead to true AGI or if fundamentally different architectures are needed [14].

The geopolitical dimensions of AGI development add another layer of complexity. The competition between the U.S. and China in AI development has raised questions about regulatory approaches and national security implications [28]. Some experts warn that excessive regulation could hinder innovation, while others emphasize the need for safety standards [43].

From an economic perspective, AGI's potential to automate cognitive tasks raises concerns about job displacement and workforce transformation [5]. The financial sector, which employs millions worldwide, may need to adapt to these changes by developing new roles that complement AGI capabilities [29].

X. METHODOLOGY

Our analysis combines qualitative assessment of recent publications with quantitative market projections [10], [25]. We employ comparative analysis frameworks [23]. The categories are shown in table 4.

Table 4: Key AGI Reference Categories

Category	References
Technical Foundations	[41], [58]
Ethical Considerations	[7], [39]
Commercial Applications	[11], [24]

A) Results
Analysis reveals three key trends:
- Accelerated corporate investment [52]
- Emerging regulatory challenges [43]
- Technical breakthroughs in neural architectures [38]

XI. FINAL SYNTHESIS, RECOMMENDATIONS AND CONCLUSIONS

This survey highlights AGI's rapid development trajectory and multidisciplinary implications. As research progresses, careful consideration of ethical frameworks [23] and economic impacts [47] becomes imperative.

Artificial General Intelligence represents both an extraordinary opportunity and a significant challenge for the technology sector and society at large. While true AGI remains elusive, recent advancements suggest we may be closer than previously thought [10]. The financial industry's early adoption of AGI-like systems demonstrates the technology's potential to transform established sectors [45].

As research progresses, it will be crucial to address the ethical, economic, and security implications of AGI development [41]. Collaborative efforts between academia, industry, and policymakers will be essential to ensure AGI's benefits are widely distributed while mitigating potential risks [44].

The coming years will likely see continued debate about AGI's definition, capabilities, and timeline [36]. Regardless of these uncertainties, AGI research is pushing the boundaries of artificial intelligence and opening new possibilities for human-machine collaboration across all sectors of the economy.

Our comprehensive analysis yields four principal conclusions about AGI's current and future landscape:

A) Technical Maturation
The path to AGI is progressing through hybrid architectures [23], with financial applications driving near-term commercialization [11]. However, fundamental challenges in transfer learning [13] and cognitive architecture [54] remain unresolved.

B) Economic Impact
The AGI market shows remarkable growth potential (projected $52B by 2032 [40]), but creates workforce polarization requiring:
- Reskilling initiatives in 64% of financial institutions [25]
- New educational paradigms blending technical and domain expertise [56]

C) Ethical Imperatives
Three critical governance challenges emerge:
- Alignment of AGI systems with human values [41]
- Mitigation of environmental costs [7]
- Prevention of geopolitical fragmentation [28]

D) Research Priorities
We identify three high-priority research directions:
- Development of multi-domain evaluation benchmarks
- Longitudinal studies of workforce displacement
- Standardized sustainability metrics for AGI training

The AGI revolution demands collaborative, multidisciplinary approaches to

harness its benefits while mitigating risks [44]. As the technology matures, continuous assessment of its societal impacts will be essential for responsible development.

DECLARATION

The views are of the author and do not represent any affiliated institutions. Work is done as a part of independent researcher. This is a pure research paper and all results, proposals and findings are from the cited literature.

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