



**“Artificial Intelligence (AI): The Good, The Complex and The Anticipated”, leans heavily on the fact that AI is changing our lives– we need to know where to look today.**

**Yakub Aliyu**

Epilogue :

# Who am I?

[https://youtu.be/jMW8\\_YVFgzY?feature=shared](https://youtu.be/jMW8_YVFgzY?feature=shared)

3 mins. Video contribution from GTC 2024





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# AI in the Past, Present and Future

Historical AI

Anticipated Developments

Challenges Ahead

Current State of AI

The Road to AI

AI in the Next Decade

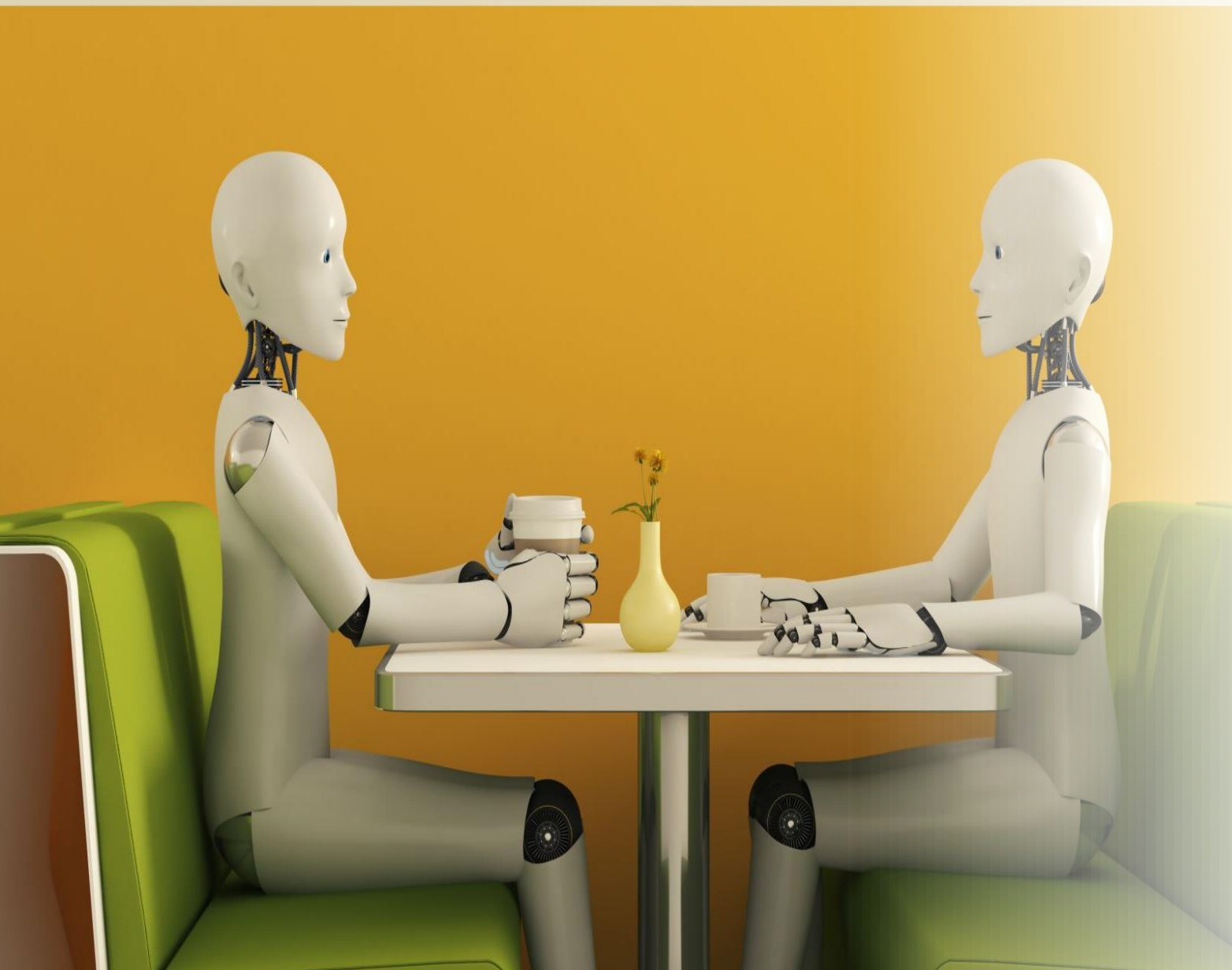




Nia's story from a small rural African village constantly threatened by severe droughts, leading to poor crop yields and food scarcity



# Two thought-provoking moments for all of us: AI's future and its impact on humanity.



AGI refers to AI that can perform any intellectual task that a human being can, including abstract thought, reasoning, and learning from experience

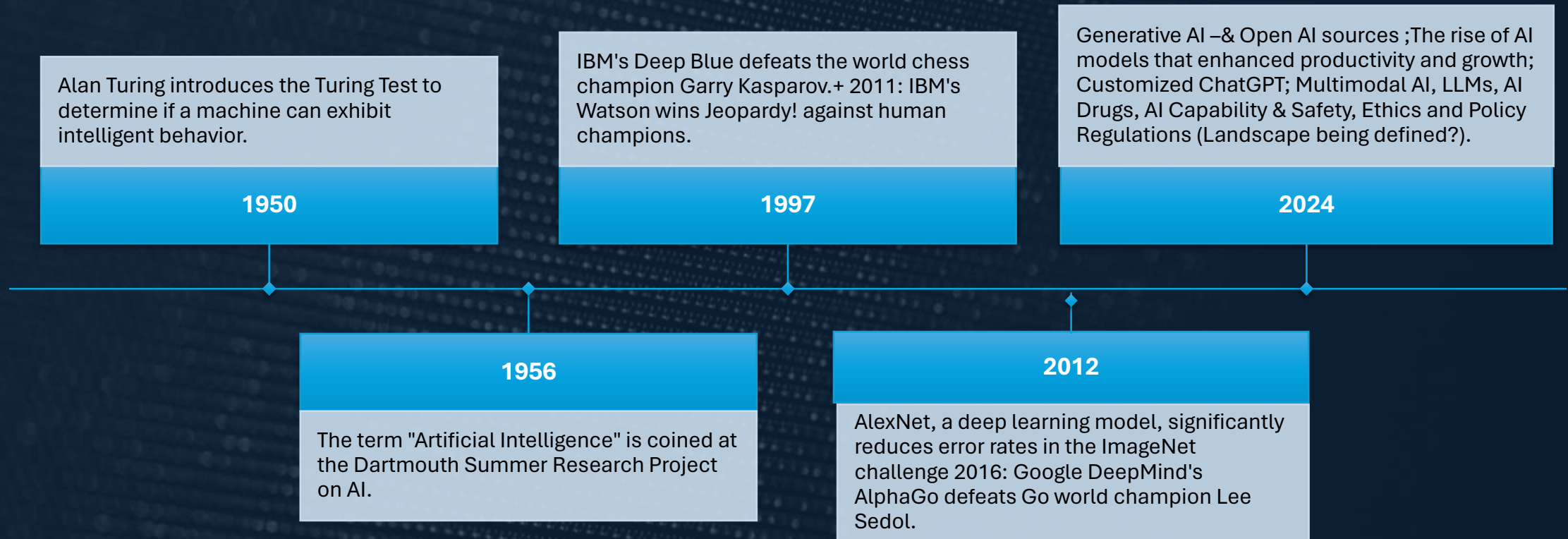
**AGI is already being achieved!**

How might it change the way we live, work, and interact with each other?

What ethical considerations should we take into account when developing AGI?

How can we ensure that AGI remains under human control and benefits society?

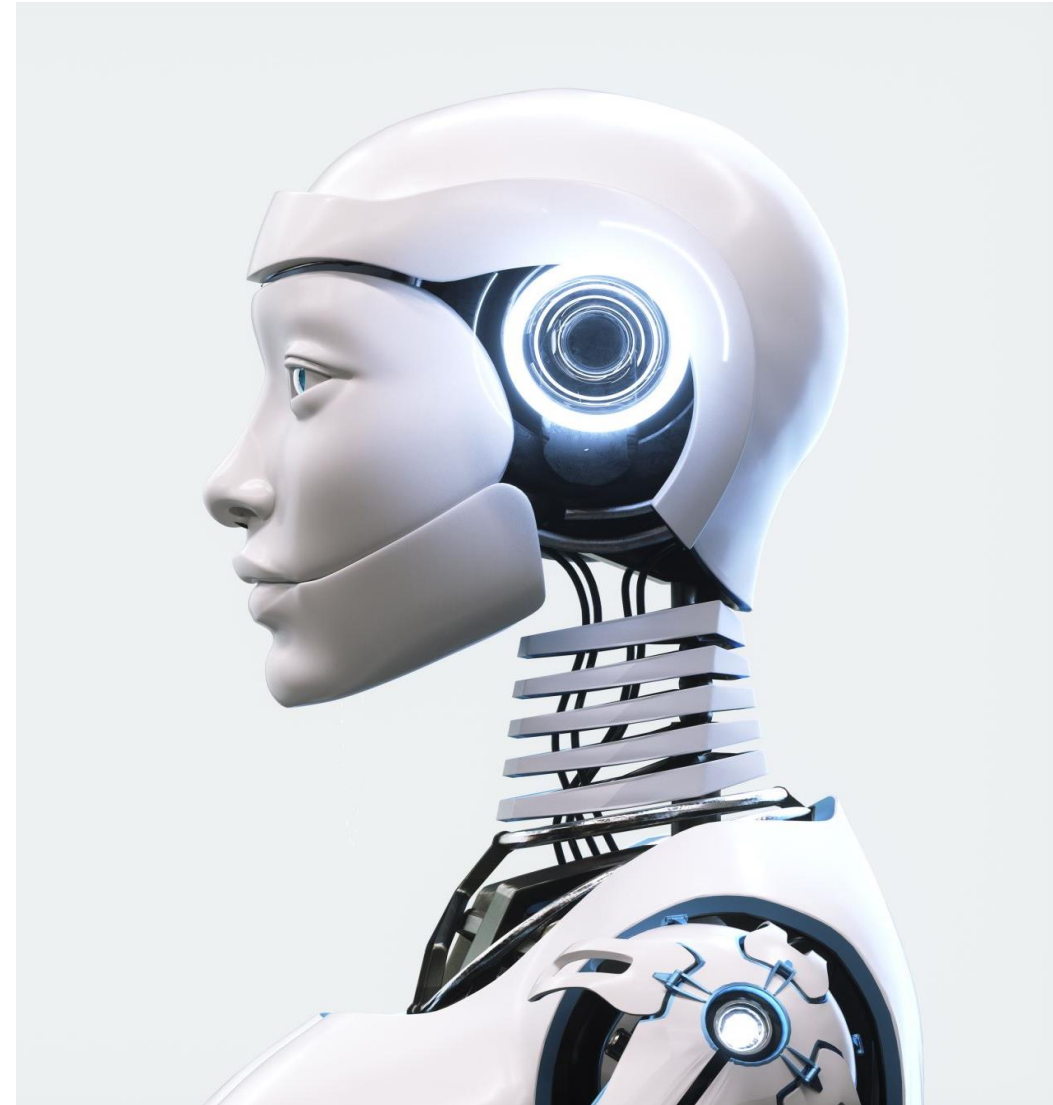
# Artificial Intelligence : key milestones:





# Major Types of Artificial Intelligence

- ❑ **Reactive Machines:** —These machines focus on reacting to current situations without memory or learning capabilities. An example is Deep Blue, a chess-playing computer.
- ❑ **Limited Memory:** Learns from past experiences and uses memory to make decisions. Example: Self-driving cars.
- ❑ **Theory of Mind:** Understands human emotions, intentions, and beliefs. Example: Advanced chatbots.
- ❑ **Self-Aware AI:** This is the most advanced form of AI, where the machine possesses consciousness and is aware of its existence. However, it's important to note that this is still a theoretical concept and has not yet been achieved in practice.



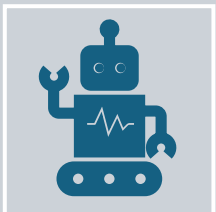




**1. Machine Learning (ML):** A subset of AI that allows systems to learn and improve from experience without being explicitly programmed automatically.  
Grouped into Gen AI and Causal AI



**2. Deep Learning (DL):** A subset of ML, DL uses neural networks with multiple layers to analyze complex patterns in large amounts of data, enabling advanced image and speech recognition.



**3. Natural Language Processing (NLP):** NLP enables AI systems to understand, interpret, and generate human language, facilitating seamless communication and interaction

# Sub-types of Artificial intelligence



# Sub-types of Artificial intelligence

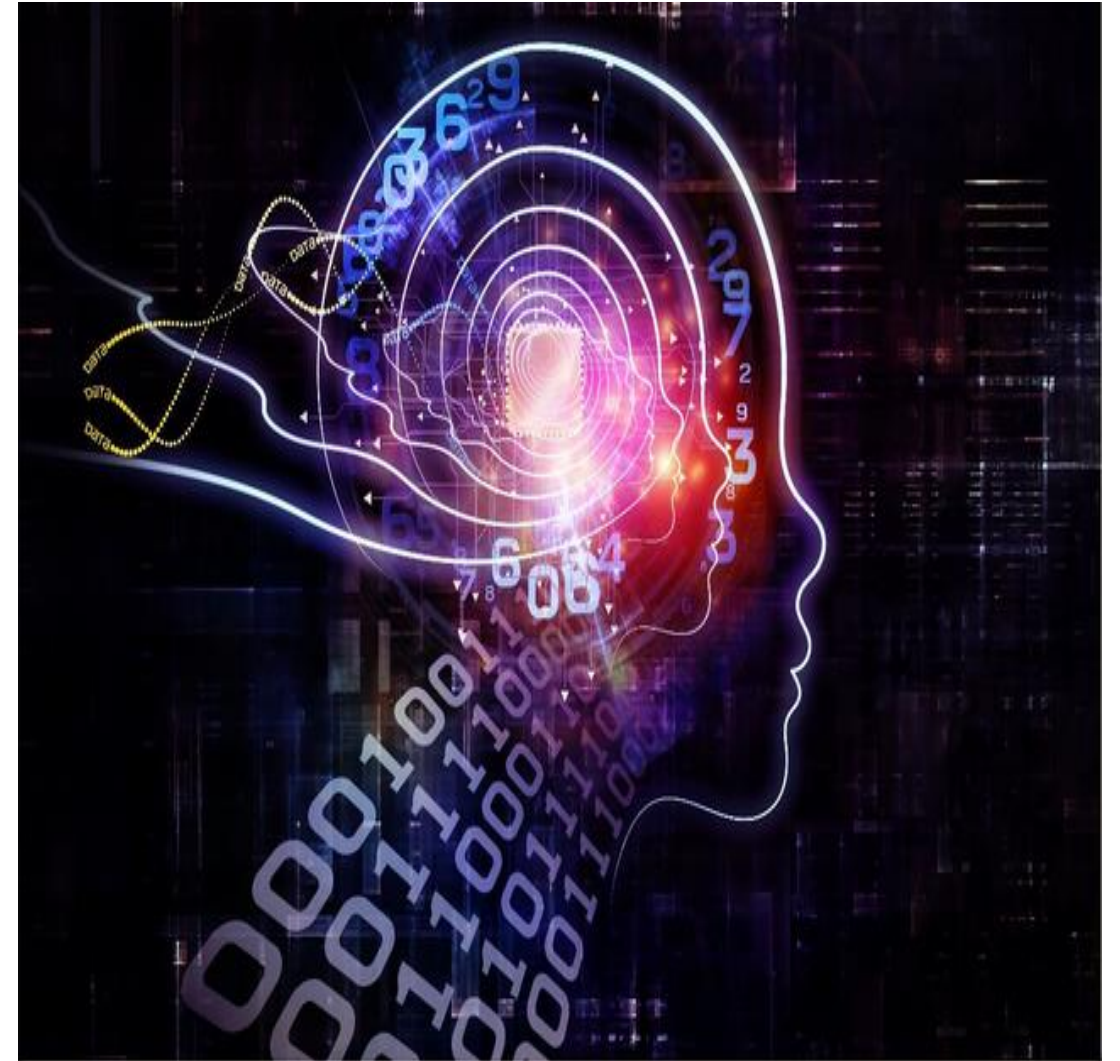


**4. AI-powered computer vision enables machines to perceive and interpret visual information, such as images and videos, enabling object detection, image segmentation, and facial recognition.**



**5. The integration of AI in robotics allows for the development of intelligent robots.**

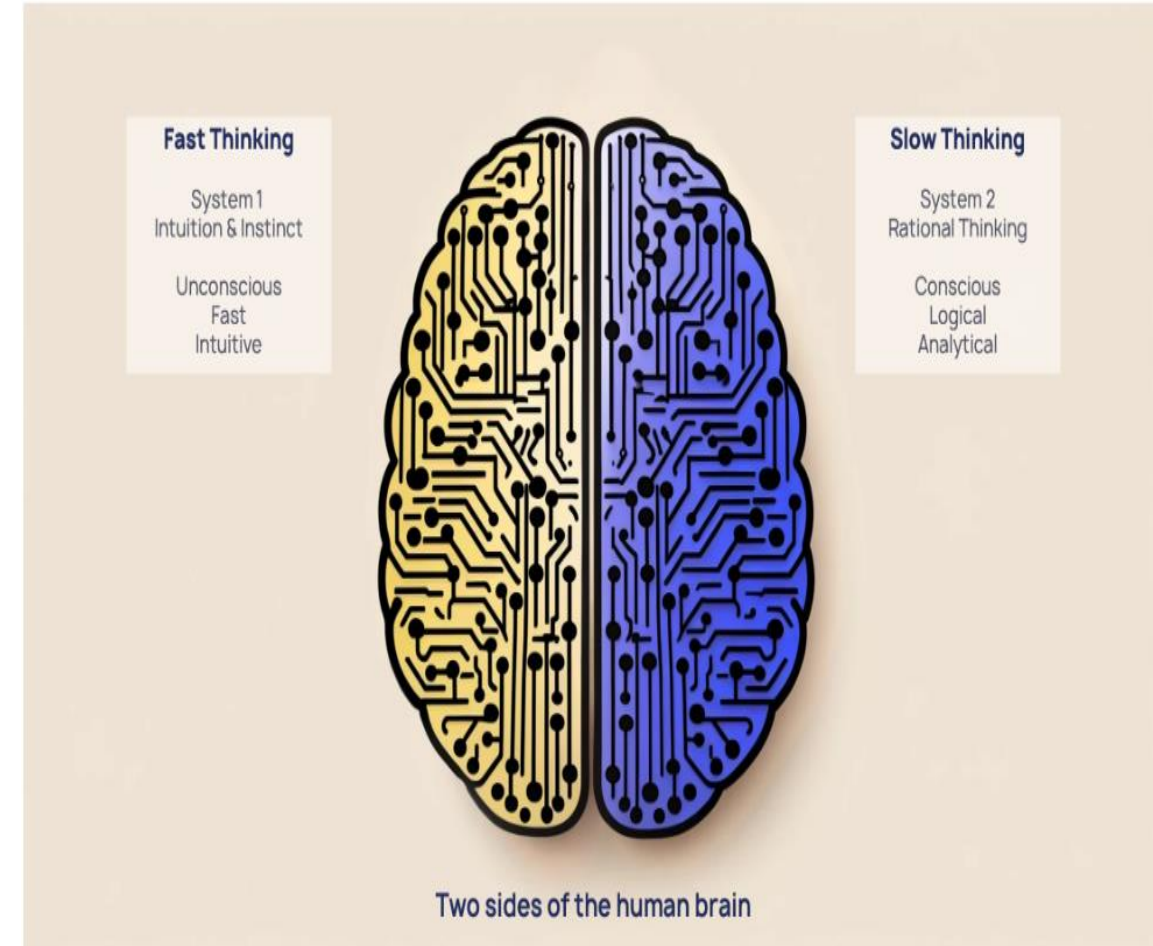
**They can perform complex tasks with precision and autonomy, revolutionizing industries like manufacturing, healthcare, and logistics.**



# GenAI and Causal AI - Explained

- ❑ Generative AI (GenAI) has shown much promise and generated significant excitement across the technology world - Large Language Models (LLMs) can engage in human-like conversations
- ❑ GenAI is falling short in terms of applicability to decision-making situations.
- ❑ Causal AI: the revolution uncovering the 'why' of decision-making
- ❑ Causal AI can also help address the issue of bias in AI
- ❑ Causal AI can identify and mitigate spurious correlations and associations that may lead to biased predictions
- ❑ The critical challenge for enterprise decision-making is achieving "fast" thinking while ensuring proposed actions are grounded and optimum.
- ❑ Whereas causal AI relies on recognizing correlations and patterns in events, it is rooted in a deeper understanding of the cause and effect behind them.
- ❑ Teaming GenAI and causal AI combines the advantages of fast and slow thinking, facilitating quick and accurate decision-making.

This integration empowers businesses with a framework for reliable, scalable, and explainable decision-making strategies.



The combination of causal AI and GenAI resembles the two sides of the human brain.



#### Credit Risk

Predict whether customers will repay or default on their loan to mitigate the risk to the lender while achieving a transparent and explainable loan approval process.

← Logout

#### Causal Graph

The graph below shows the causal structure of your business environment.



Understand Causal Graph

Modify Causal Graph

Restore Causal Graph

#### PERFORMANCE ANALYSIS

The model has **good** performance and **good** generalizability to unseen data

Model Performance

#### FAIRNESS AND BIAS ANALYSIS

**Good**

The model predictions are fair with respect to these protected variables:

**Gender** affects **Income**, but doesn't directly affect **Prediction (Loan Repayment)**.

**Has Higher Education** affects **Prediction (Loan Repayment)** through **Income**. Including **Income** in a model may lead to implicitly utilising information on **Has Higher Education** and introducing unwanted bias.

Fairness & Bias Analysis

# Fairness and bias assessment of a Causal AI model



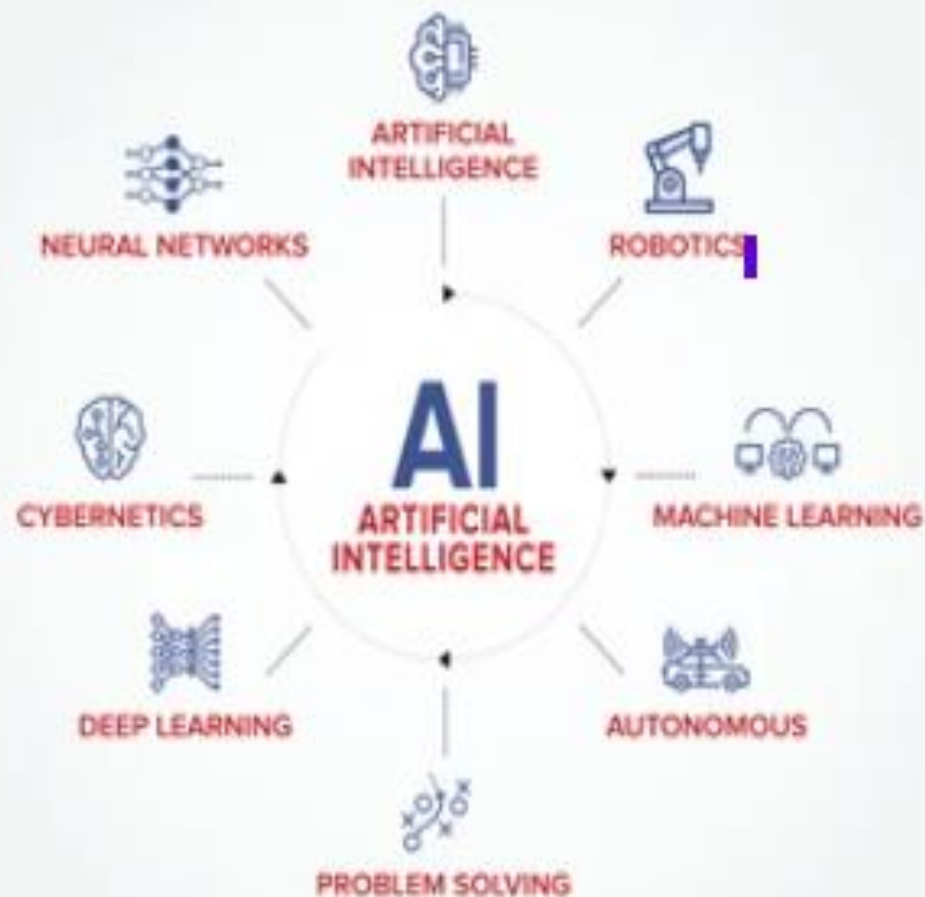
# Artificial Intelligence (AI)

Artificial Intelligence (AI) is a fascinating field that simulates human intelligence in machines. These machines are programmed to perform tasks that typically require human intelligence, such as learning, problem-solving, decision-making, and pattern recognition. The potential of AI is truly awe-inspiring.

- ❑ AI systems can be categorized into three main types:
- ❑ **Narrow or weak AI**, designed for specific tasks and general purpose
- ❑ **Strong AI or AGI**, Intelligent machines that are indistinguishable from the human mind
- ❑ **Artificial Superintelligence (ASI)** envisions machines surpassing human intelligence in every aspect



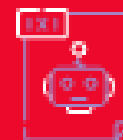
# Forms of AI



**Artificial Narrow Intelligence**



**Artificial General Intelligence**



**AI in Our Daily Lives**



**Artificial Super Intelligence**

## Understanding How AI Works

AI applications are built on algorithms, and they operate based on the principles of:

- **Learning**
- **Reasoning**
- **Problem Solving**
- **Perception**







Artificial Intelligence (AI) enables machines to learn from data, recognize patterns, and make decisions with minimal human intervention.

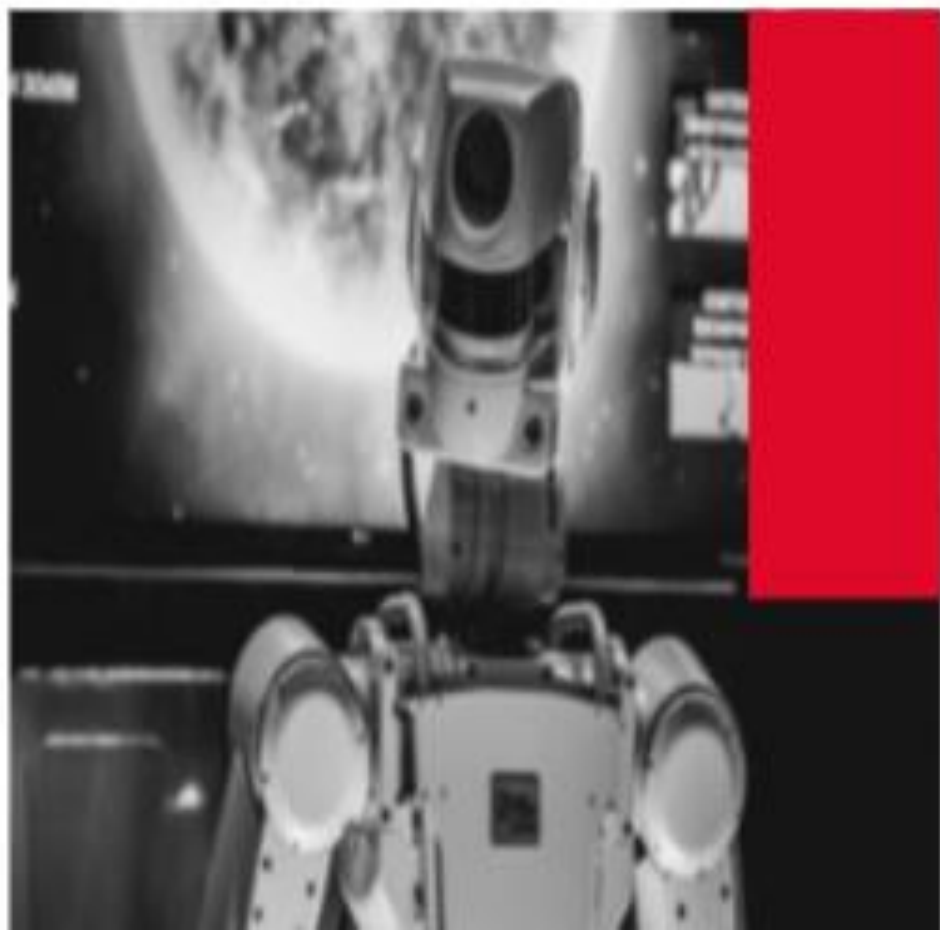
*Here's a simplified explanation of how AI operates*

- ❑ **Input Data:** AI systems collect data in various forms, such as text, images, audio, and video; this data is categorized and prepared for processing.
- ❑ **Processing:** The AI system processes the input data using algorithms, identifying patterns and learning from them.
- ❑ **Outcomes:** Based on the patterns recognized during processing, AI can predict outcomes, make decisions, or perform tasks typically requiring human intelligence, such as having conversations or recommending products.
- ❑ **Adjustments:** If the AI's predictions or decisions are inaccurate, it learns from these errors. The algorithms are adjusted, and the system improves its performance over time.
- ❑ **Assessments:** Finally, the AI assesses its performance based on the outcomes and adjustments, refining its algorithms to make more accurate predictions in the future.



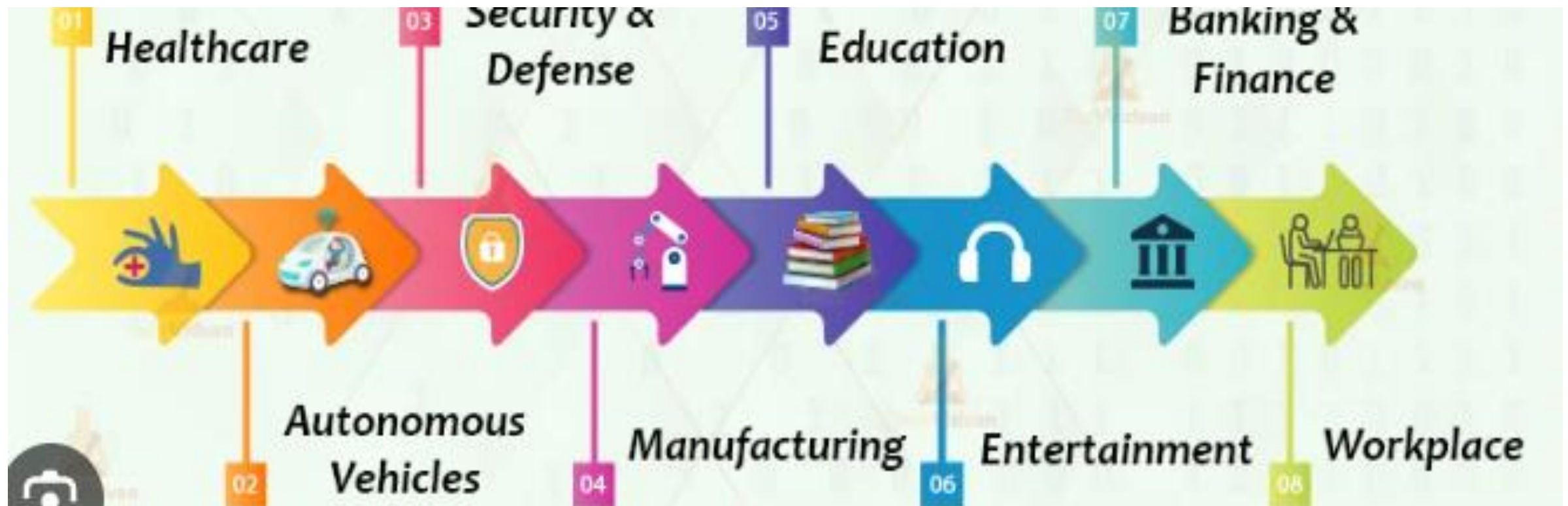


# Positive Impacts of AI



This branch of AI fosters advancements in various fields through:

# The Positive impacts of AI



# Top AI Use Cases



# The State of AI Today

- ❑ AI has made remarkable progress in recent years, influencing various industries and daily lives.
- ❑ In healthcare, **AI-driven diagnostics and precision medicine** are revolutionizing patient care.
- ❑ Self-driving cars and drones are reshaping transportation, while **AI-enabled personalization** has transformed e-commerce and online entertainment.
- ❑ Additionally, AI-powered **chatbots and virtual assistants** are changing how we interact with technology and access information.





# The Good: Positive Aspects of AI

## Efficiency and Automation

- AI automates repetitive tasks, freeing up human resources for more creative and strategic work.
- Businesses benefit from streamlined processes, reduced costs, and increased productivity.

## Precision and Accuracy

- AI algorithms can analyze vast amounts of data with minimal error.
- In medical diagnostics, AI aids in early disease detection and personalized treatment plans.

## Personalization

- AI tailors recommendations based on individual preferences.
- Think of personalized movie or music recommendations—AI makes them possible.

# The Good: Positive Aspects of AI

## Scientific Discovery

- AI accelerates research by analyzing complex data patterns.
- Drug discovery, climate modeling, and genomics benefit from AI-driven insights.

## Safety and Security

- AI enhances security through facial recognition, fraud detection, and threat analysis.
- Autonomous vehicles use AI for collision avoidance and safe navigation.

## Healthcare Revolution

- AI assists doctors in diagnosing diseases, predicting outbreaks, and managing patient data.
- Telemedicine and remote monitoring improve healthcare access.

# The Good: Positive Aspects of AI

## Environmental Impact:

- AI optimizes energy consumption, reduces waste, and aids conservation efforts.
- Precision agriculture minimizes pesticide use and maximizes crop yield.

## Education:

- AI-generated art, music, and literature inspire creativity.
- Artists collaborate with AI to explore new frontiers.

## Creativity and Art:

- AI-generated Education and Training.
- Educators collaborate with AI to explore new frontiers.



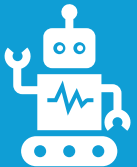
# TOP AI Uses Today



**1. Healthcare:** AI enables more accurate diagnostics, personalized treatment plans, and early detection of diseases. Streamlines administrative tasks, improving efficiency and patient care. **AI-generated gene editing breakthrough**



**2. Transportation:** Self-driving cars and AI-optimized traffic management systems improve road safety and reduce congestion. Improved public transportation planning and routing enhance mobility options for users.



**3. Customer Service:** AI-powered chatbots provide 24/7 customer support, ensuring prompt inquiries and issues resolution. Personalized recommendations based on user preferences and behaviors enhance customer satisfaction.



# TOP AI Uses Today

## 4. Education:

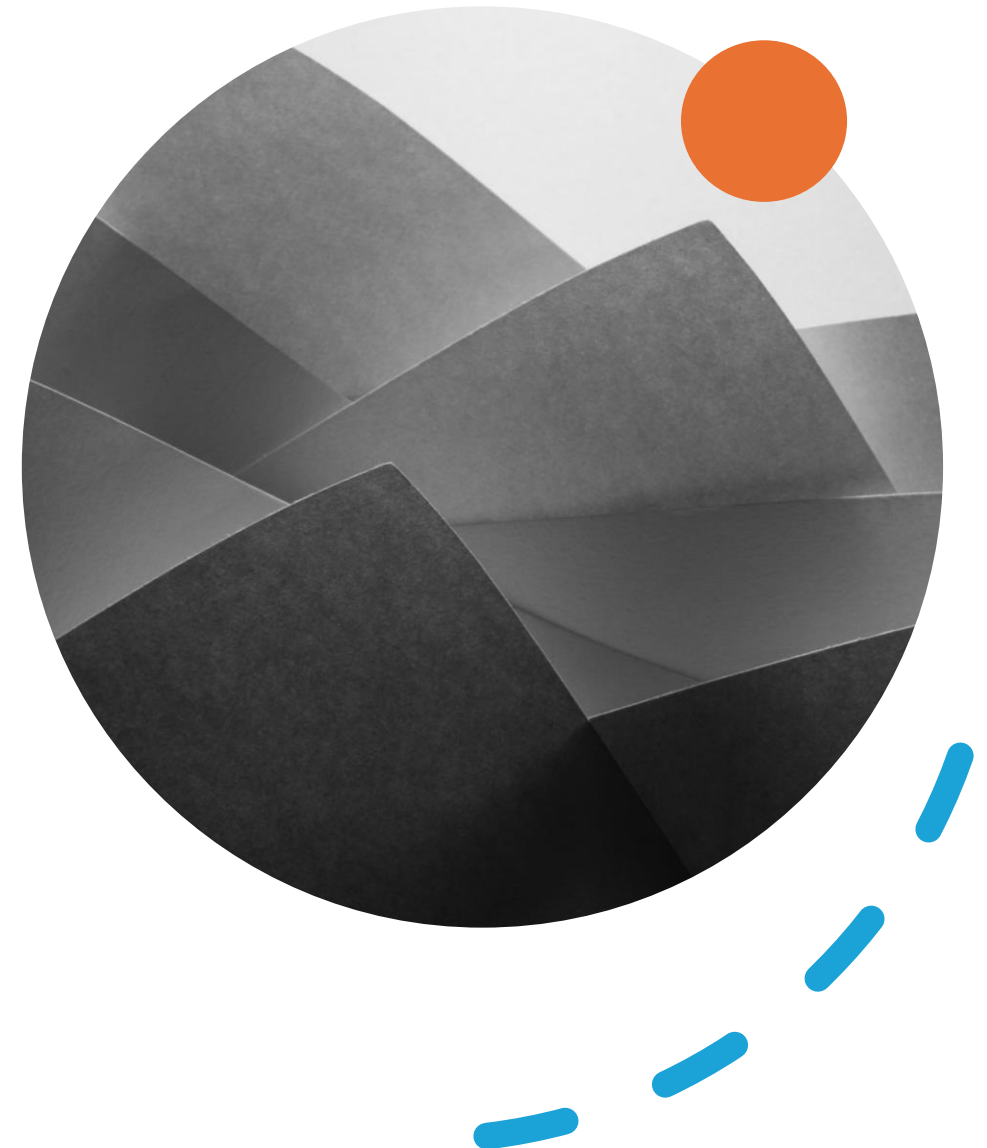
- Personalized learning platforms powered by AI offer tailored educational experiences to cater to individual learning styles and needs.
- Intelligent tutoring systems provide real-time feedback and guidance, improving student performance and engagement.

## 5. Entertainment:

- AI-generated content, such as music, movies, and video games, offers personalized experiences to users.
- Improved recommendations on streaming platforms provide users with more relevant and engaging content.

## 6. Agriculture and Resource Management:

- AI-driven precision agriculture techniques optimize resource allocation and reduce waste.
- Efficient water, energy, and other resources management through AI systems contributes to environmental sustainability.



# TOP AI Uses Today



## 7. Security and Surveillance:

**AI-powered security systems enable real-time threat detection and response, improving public safety.**

**Facial recognition and object detection technologies help maintain security in public spaces, airports, and other critical infrastructure.**

## 8. Accessibility:

**AI-powered assistive technologies enable individuals with disabilities to communicate, access information, and navigate their environment more effectively.**

## 9. Research and Development:

**AI accelerates scientific discovery, materials design, and drug development by processing vast data and identifying patterns.**



# *Generative AI-background*

**Fasted technology adopted in History, A pivotal year in artificial intelligence, understanding and adapting to emerging trends is essential to maximizing potential, minimizing risk, and responsibly scaling generative AI adoption**



**Generative AI has been the biggest technology story of 2023. Almost everybody's played with ChatGPT, Stable Diffusion, GitHub Copilot, or Midjourney.**

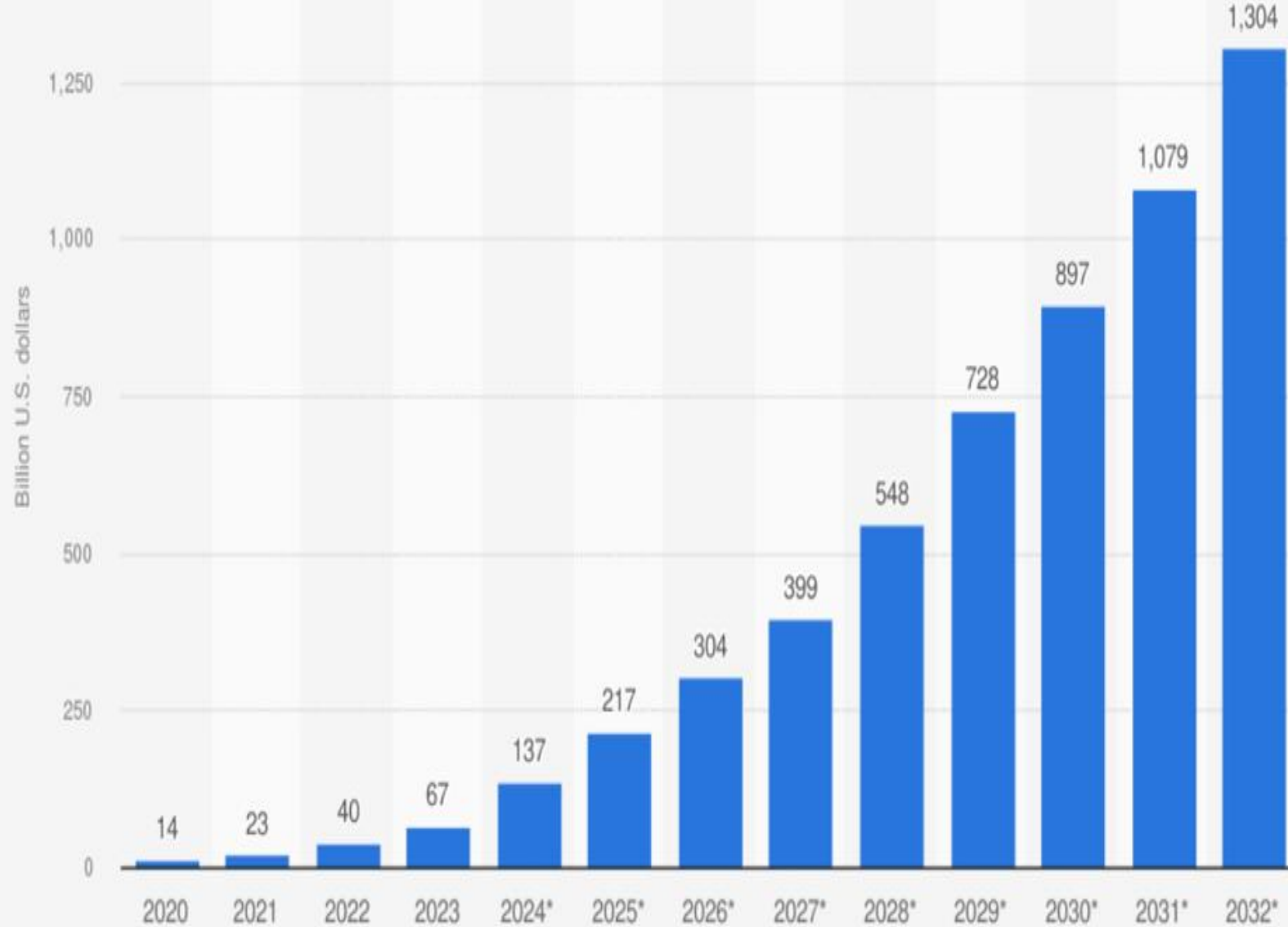


**It began with the launch of Meta's LLaMa family of large language models (LLMs) and was followed by StableLM, Falcon, Mistral, and Llama3.**



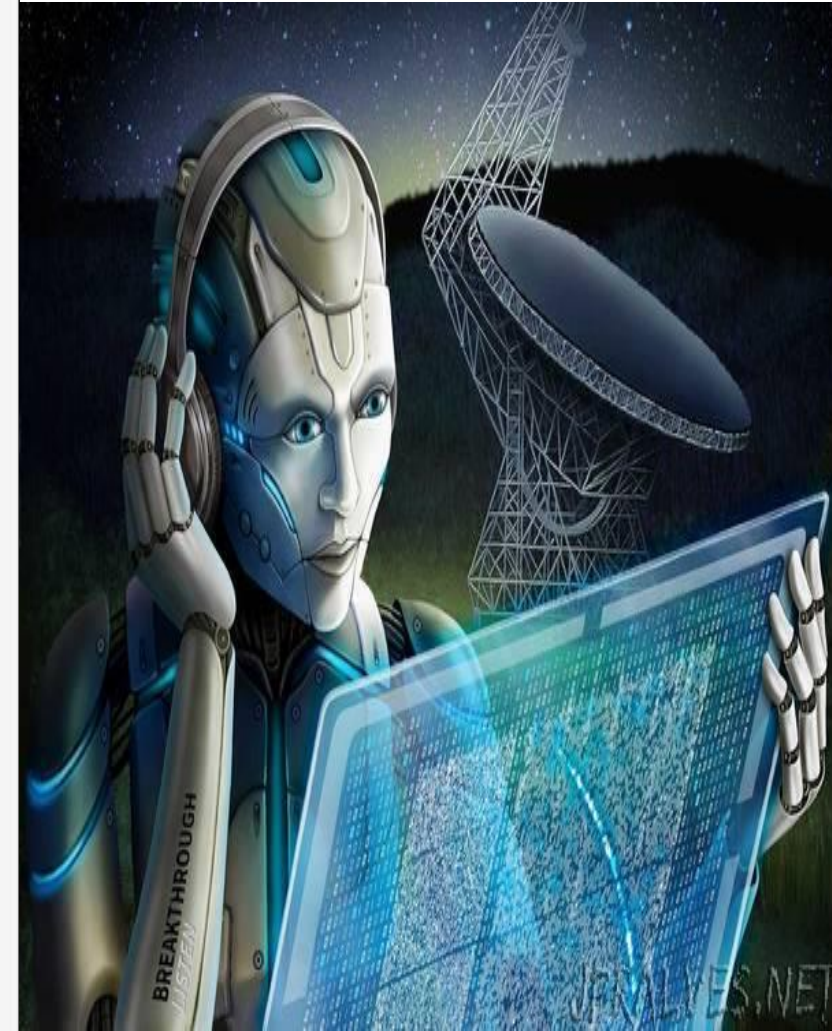
**A few have tried Bard or Claude or run LLaMA1 on their laptops. Everyone has opinions about how these language models and art generation programs will change the nature of work, usher in the singularity, or perhaps even doom the human race.**

# Generative AI- background Growth



Source  
Bloomberg  
© Statista 2024

Additional Information:  
Worldwide; 2023




# Generative AI-*background*


Generative AI (gen AI) and large language models (LLMs) are revolutionizing personal and professional lives.



From supercharged digital assistants that manage email to seemingly omniscient chatbots that can communicate with enterprise data across industries, languages, and specialties, these technologies are driving a new era of convenience, productivity, and connectivity



Generative artificial intelligence (AI) describes algorithms (such as ChatGPT) that can create new content, including audio, code, images, text, simulations, and videos.



**In enterprises, we've seen everything from wholesale adoption to policies that severely restrict or even forbid the use of generative AI.**



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*Example:*

## Generative AI - Technology Media & Telecommunications (TMT)

The emergence of generative AI (gen AI) is a double-edged sword, presenting leaders with both a challenge and a significant opportunity. Require significant adaptation and offer the potential to steer their organizations into a more prosperous future.

### □ How big is the opportunity?

McKinsey's research estimates that gen AI could add to the economy by between \$2.6 trillion and \$4.4 trillion annually while increasing the impact of all artificial intelligence by 15 to 40 percent.

### □ Technology, Media, and Telecommunications (TMT)

- New-gen AI use cases are expected to unleash between \$380 billion and \$690 billion in impact—
  - \$60 billion to \$100 billion in telecommunications,
  - \$80 billion to \$130 billion in media and about
  - \$240 billion to \$460 billion in high tech.

**Anything not connected to AI seems to be considered obsolete or ineffective within the next three years.**

# The Complex: Challenges and Ethical Considerations of AI

Unveiling the nuances in AI's progression and implementation



# Challenges Ahead

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Despite its progress, AI faces several challenges, including data privacy concerns, algorithmic bias, job displacement, and model complexity.



These challenges must be addressed responsibly to ensure AI's continued growth and public trust.



Regulatory bodies and AI developers must collaborate to establish ethical AI development and deployment guidelines.





# The Complex: Challenges and Ethical Considerations



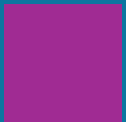
**Ethics and Bias:** Address bias in AI algorithms and the need for fairness.



**Privacy Concerns:** Discuss data privacy, surveillance, and responsible data handling.



**Job Displacement:** Explore the impact of automation on employment.



**Transparency and Accountability:** Ensuring these systems are transparent and accountable for their decisions is an important ethical consideration.



# The Complex: Challenges and Ethical Considerations

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## Risk

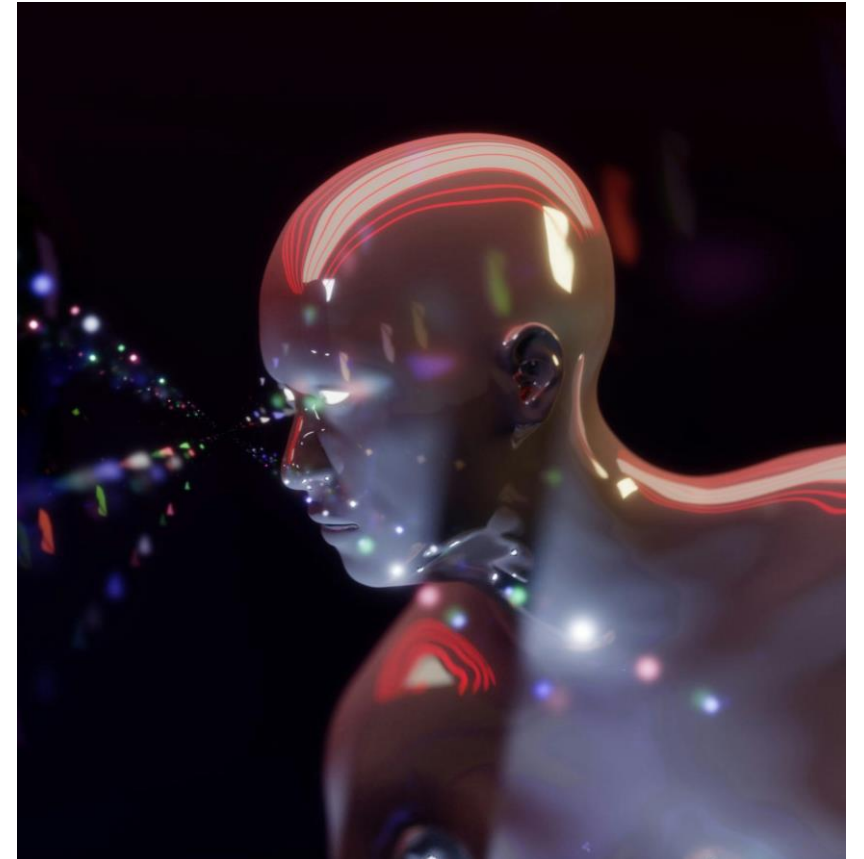
- Consider risks associated with critical AI systems.

## Explainability:

- Explainability: The challenge of understanding AI decision-making

## Safety and Security:

- Consider risks associated with critical AI systems.



# The Complex: Challenges and Ethical Considerations

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**AI:+ Need for large amounts of data.**

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**Unknown Unknowns:** There are potential risks and issues with AI that we may not yet be aware of<sup>1</sup>

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**Hallucinations in LLMs:** Large Language Models (LLMs) can sometimes generate outputs that seem nonsensical or "hallucinatory"<sup>1</sup>.

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**Lack of interpretability and transparency**

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**Ethical concerns (bias, privacy, job displacement)**

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**State Overreach:** There are concerns about the use of AI for surveillance and control by governments.

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**Disinformation:** AI can be used to generate misleading information or "deepfakes", which can spread disinformation

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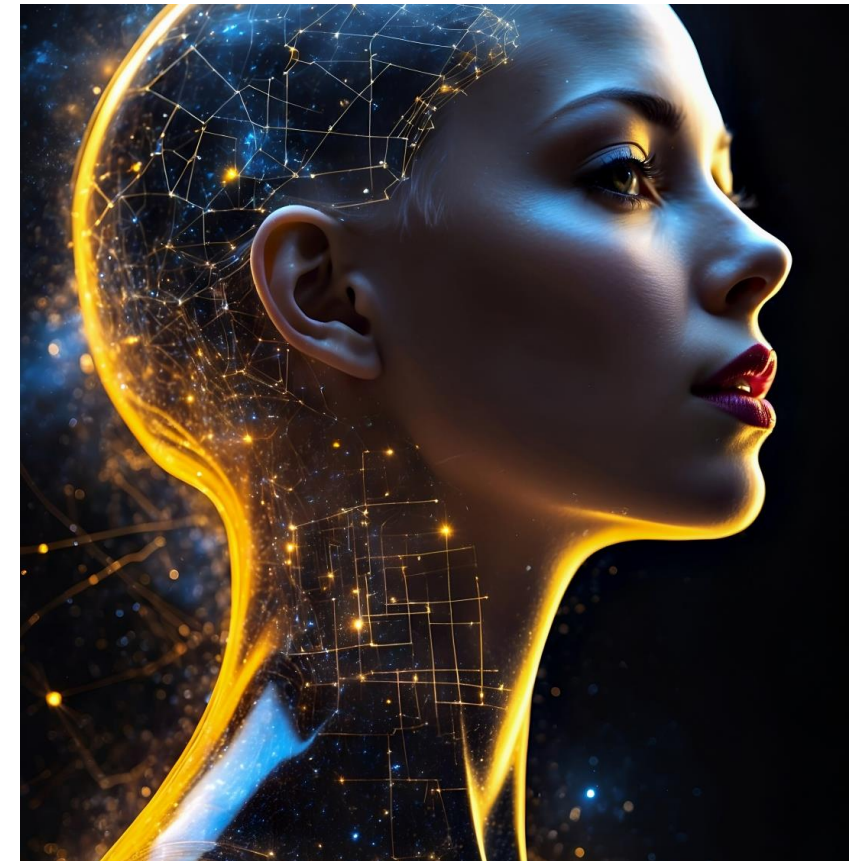
**Black Box Problem:** AI systems, especially deep learning models, are often seen as "black boxes" because their internal workings are not fully understood.

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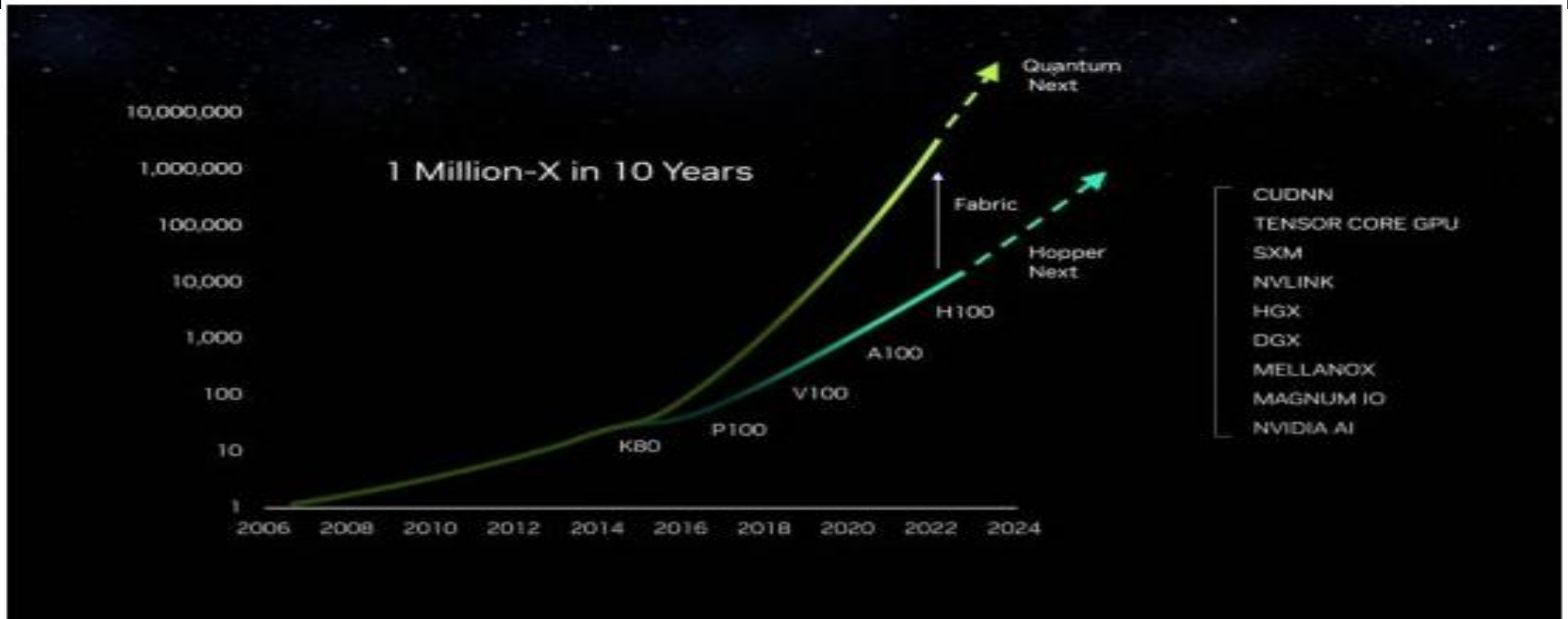
**Industry Concentration:** A small number of large tech companies currently dominate the AI field,

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**Proliferation** of small extremely powerful computers with the capability for autonomous invention



# Driver: Phenomenal Growth in Technology



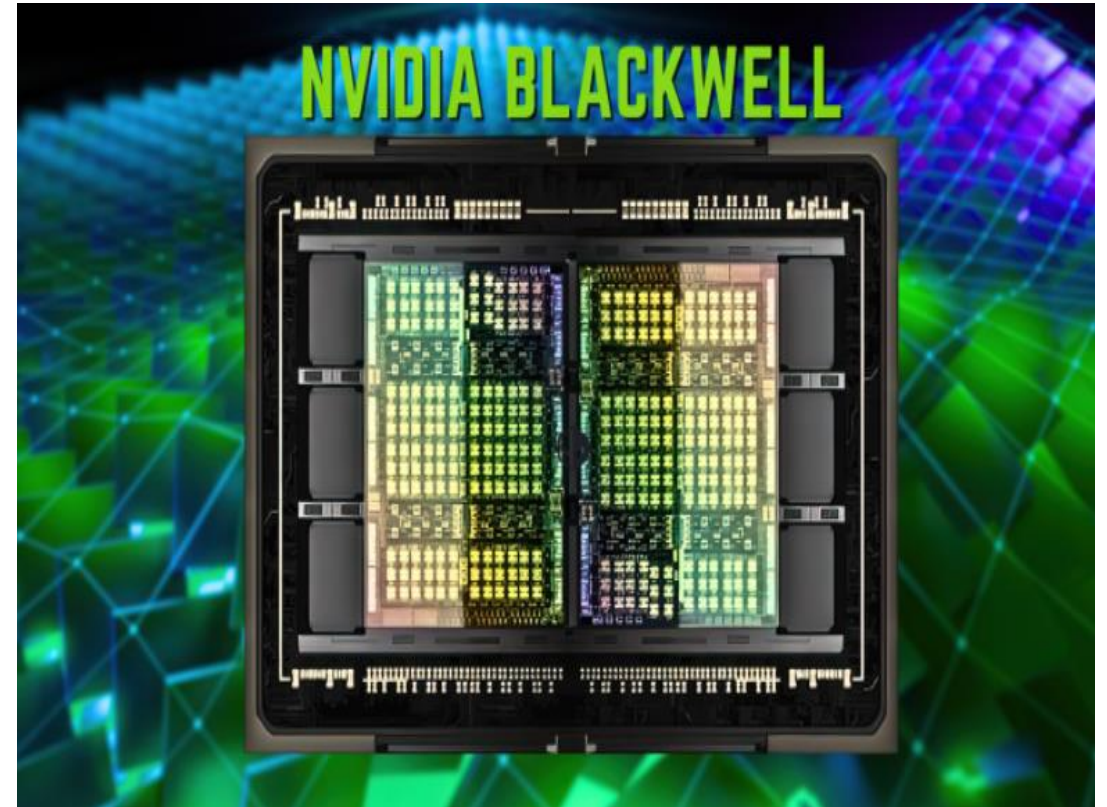
The number of parameters used in training AI models can vary greatly depending on the model's complexity.



# Example – *Blackwell GPU - Complexity in Infrastructure*

## Blackwell GPU

FP8	20 PFLOPS	2.5X Hopper
NEW FP6	20 PFLOPS	2.5X
<b>NEW FP4</b>	<b>40 PFLOPS</b>	<b>5X</b>
HBM Model Size	740B param	6X
HBM Bandwidth	34T param/sec	5X
NVLINK All-Reduce with SHARP	7.2 TB/s	4X





# Current Computer performance

AI Complexity requires significant Advancement in computer power, algorithms, data processing capabilities, and energy efficiencies

*Where are we today....in computer performance....?*

- ❑ 40 PetaFLOPS (PFLOPS) is a measure of computer performance and represents 40 quadrillion (or 40,000,000,000,000,000) Floating Point Operations Per Second.
- ❑ To put it in perspective, if you were to perform one calculation every second, it would take you approximately 1,267,650,600,228,229 years to perform the same number of operations that a computer system with 40 PFLOPS can perform in just one second.
- ❑ In terms of comparison with modern hardware, NVIDIA's Blackwell architecture offers 40 PFLOPS In the new FP4 metric, which is five times the performance of their previous Hopper architecture.
- ❑ The fastest supercomputer -Frontier, uses 21 MW to perform 1.685 ExaFLOPS ( $1.685 \times (10^{18})$  floating point operations per second).
- ❑ To put it in context the requirements for ASI could be significantly higher given its theoretical capabilities.



# Alarming Dangers of AI- That Are impacting our world today

**Lack of Transparency:** AI systems, especially deep learning models, can be complex and difficult to interpret. This lack of transparency obscures decision-making processes, leading to distrust and resistance to adopting these technologies.

**Bias and Discrimination** AI systems can perpetuate societal biases due to biased training data or algorithmic design. To minimize discrimination, unbiased algorithms, and diverse training data sets are essential

**AI Privacy Concerns:** AI technologies often collect and analyze large amounts of personal data, raising privacy and security issues. Advocating for strict data protection regulations and safe data handling practices is crucial

**Ethical Dilemmas:** Ensuring ethical values in AI systems, particularly in decision-making contexts, is challenging. Prioritizing the ethical implications of AI technologies is necessary to avoid negative societal impacts

**Security Risks :**As AI technologies become more sophisticated, the potential for misuse and cyberattacks also increases. AI-driven autonomous weaponry raises concerns about rogue states or non-state actors using this technology.

**Concentration of Power:** AI development dominated by a few large corporations and governments can exacerbate inequality and limit diversity in AI applications. Encouraging decentralized and collaborative AI development can avoid a concentration of power.

**Dependence on AI:** Overreliance on AI systems may lead to losing creativity, critical thinking, and human intuition. Striking a balance between AI-assisted decision-making and human input is vital.

**Job Displacement:** AI-driven automation can potentially lead to job losses across various industries. Workers must adapt and acquire new skills to remain relevant in the changing landscape.

**Economic Inequality:** AI can contribute to economic inequality, disproportionately benefiting wealthy individuals and corporations. Policies promoting economic equity, such as reskilling programs and inclusive AI development, are crucial in combating this issue.

**Social Manipulation** AI Algorithm being used to manipulate social discourse around the world

**Uncontrollable Self-aware** AI system  
Humanoids Robots are getting too close to reality; advanced Ai system could potentially be uncontrollable

**Market Volatility:** AI-powered system can execute market volatility, causing the collapse of the global financial system



# The Anticipated: Future Trends and Possibilities

Envisioning AI's  
Impacts and Advancements





# AI Breakthroughs

- ❑ MIT papers hope to improve the reasoning of large language models (LLMs) by introducing “libraries of abstraction” to help AI learn new tasks in ways neurologically similar to how humans achieve the feats - **A New AI Discovery Sure Looks Like the Dawn of True Machine Reasoning**
- ❑ Recent breakthroughs, such as GPT-4 and large-scale language models, demonstrate rapid natural language processing and content generation progress.
- ❑ Generative AI is making strides in creating realistic images, videos, and even art.
- ❑ Generative Adversarial Networks (GANs) They implement two neural networks contesting each other in a zero-sum game framework
- ❑ Integration of Gen AI and Causal AI
- ❑ Multimodal AI, combining vision, language, and other sensory inputs, can improve human-AI interaction.



# Key Trends Shaping the to day

High-impact generative AI tools integrated in Enterprise Environments

Multimodal AI –Generation of interdisciplinary models like OpenAI's GPT-4V or Google's Gemini, as well as open-source models like LLaVa, Adept or Qwen-VL,

Small(er) inexpensive language models and open-source advancements

GPU shortages and cloud costs and deployment environment

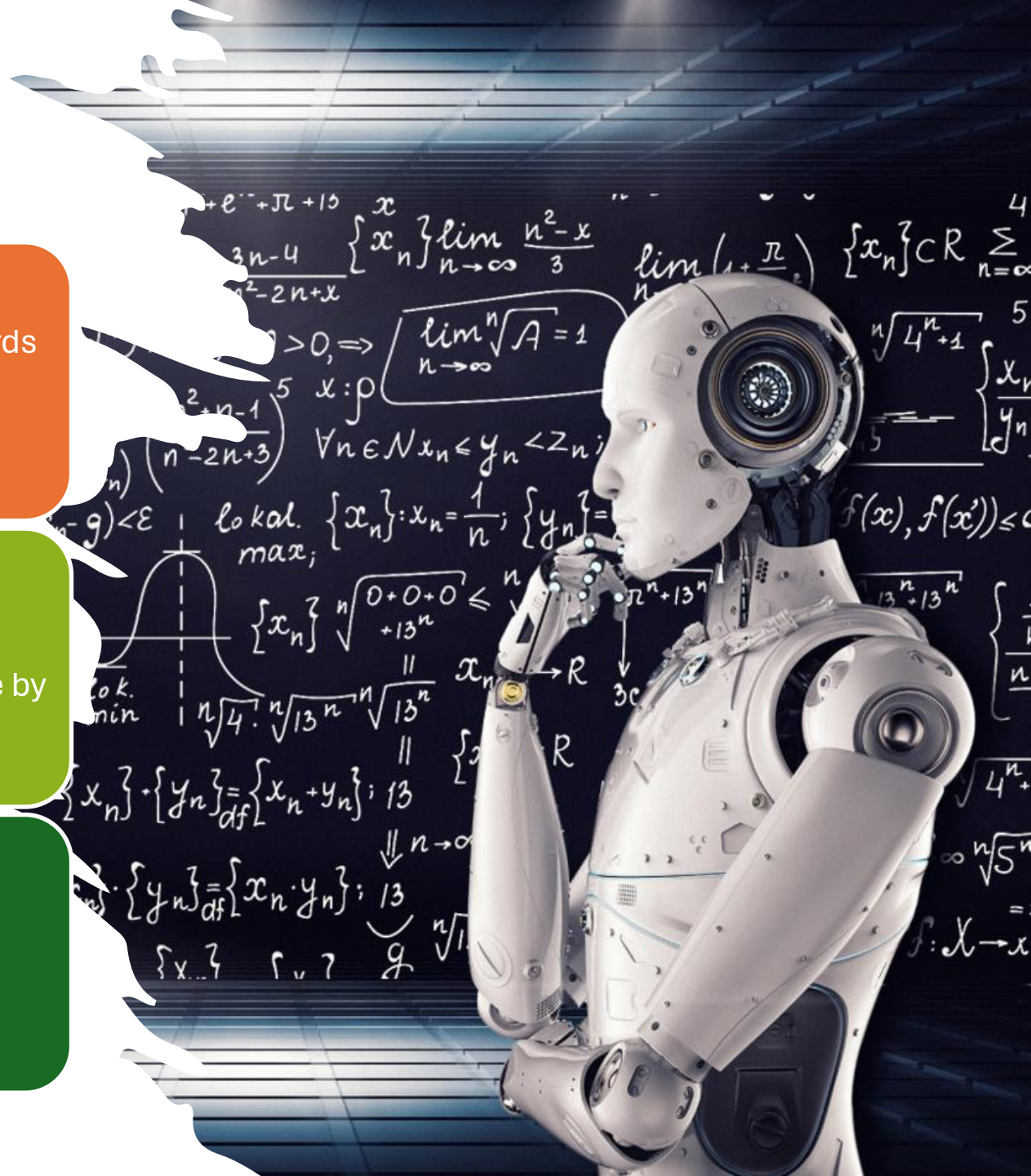


# Key Trends Shaping the to day

**Model optimization is getting more accessible** The trend towards maximizing the performance of more compact models is well served by the recent output of the open source community

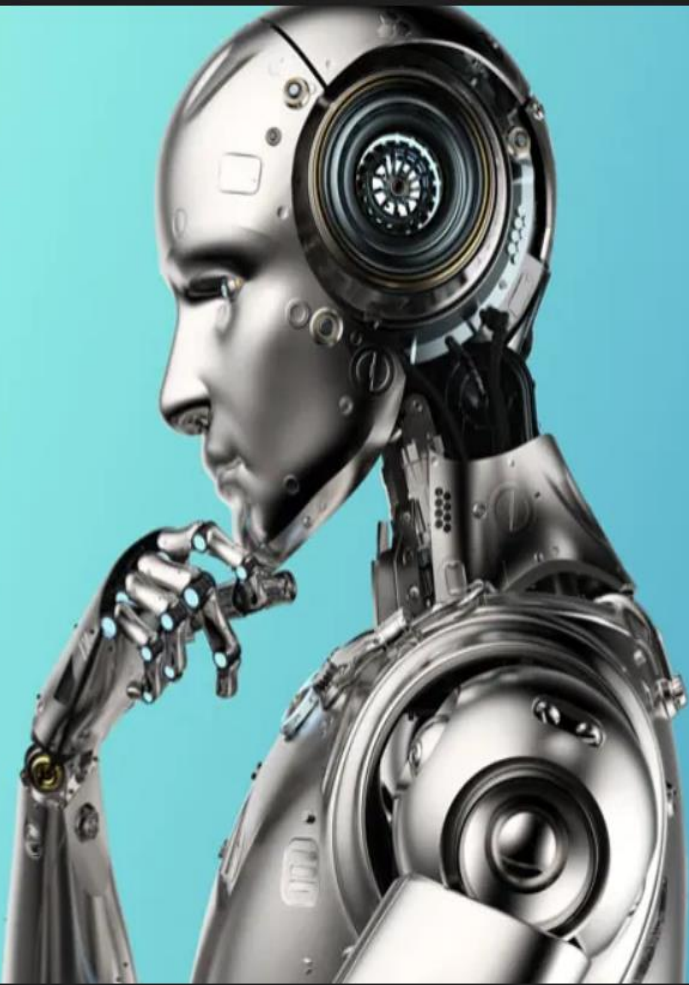
**Low Rank Adaptation (LoRA): Quantization and Direct Preference Optimization (DPO):** Alongside parallel advances in open source models in the 3–70 billion parameter space, these evolving techniques could shift the dynamics of the AI landscape by providing smaller players, like startups and amateurs, with sophisticated AI capabilities that were previously out of reach

**Customized local models and data pipelines** pursue differentiation through bespoke model





# Key Trends Shaping the today



**Powerful virtual agents- sophisticated**

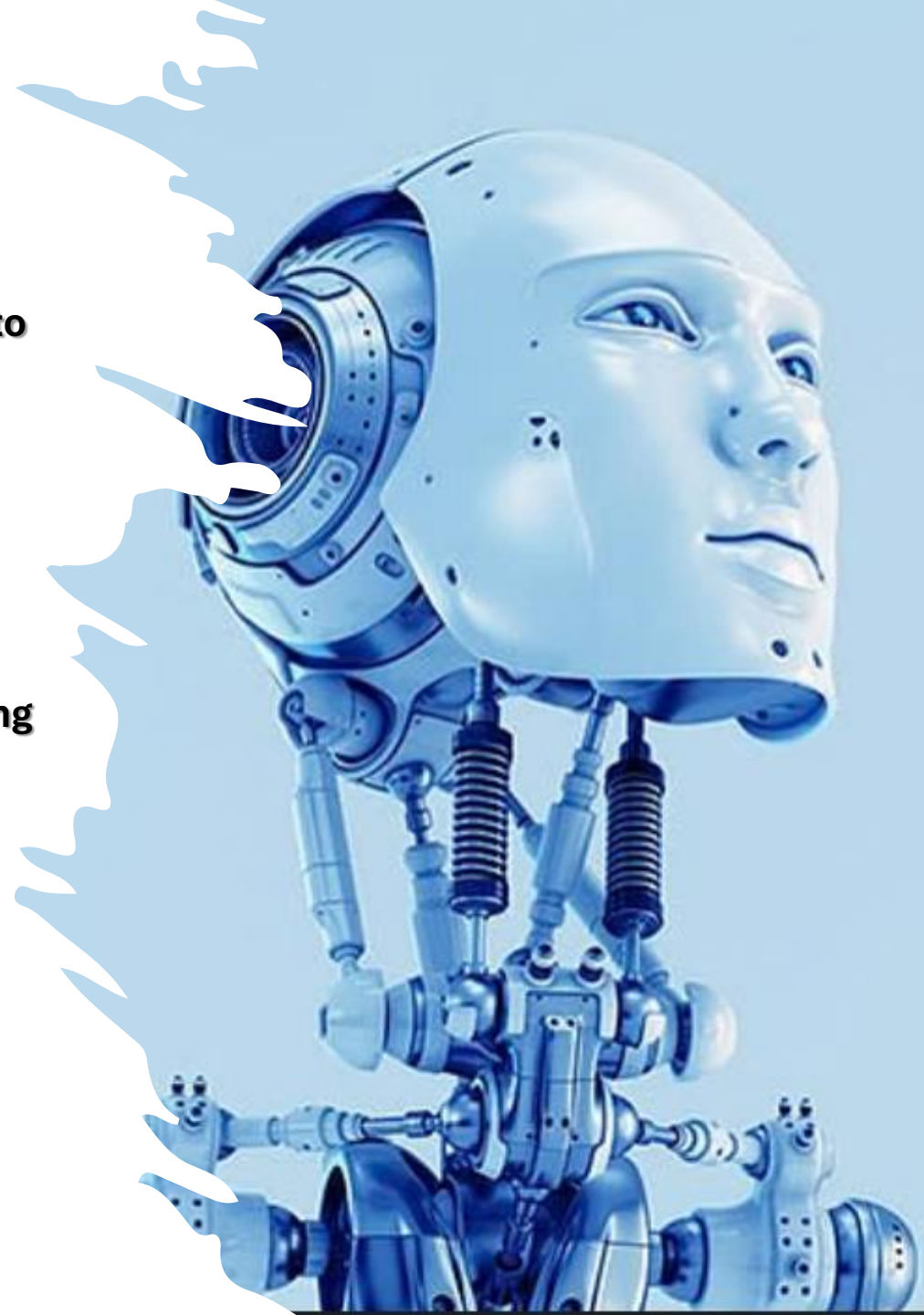
**Regulation, copyright, and ethical AI concerns - chatbots.**

**Shadow AI (and corporate AI policies)** –For businesses, this escalating potential for legal, regulatory, economic or reputational consequences is compounded by how popular and accessible generative AI tools have become. For example: “shadow IT” or “BYOAI,”



# Opportunities and Innovations

- ❑ **AI advancements present exciting opportunities for innovation in various fields, from robotics and healthcare to resource management and communication.**
- ❑ **Reinforcement learning enables AI agents to make complex decisions, while generative AI revolutionizes content creation.**
- ❑ **Natural language processing advancements are fostering more intuitive human-AI interaction.**
- ❑ **Integration of Gen AI and Casual AI will boost Business Enterprise in risk management and accurate predictions**



# Future

Looking to the future, many exciting developments and expectations exist for Artificial Intelligence (AI). Here are some anticipated advancements and potential implications:

- ❑ **Deep Learning** The significance of deep learning in recent AI advancements:
  - + Neural networks and their inspiration from the human brain
  - + Deep learning architectures (Convolutional Neural networks, Recurrent Neural Networks)
- ❑ **Applications of deep learning in computer vision and natural language processing**





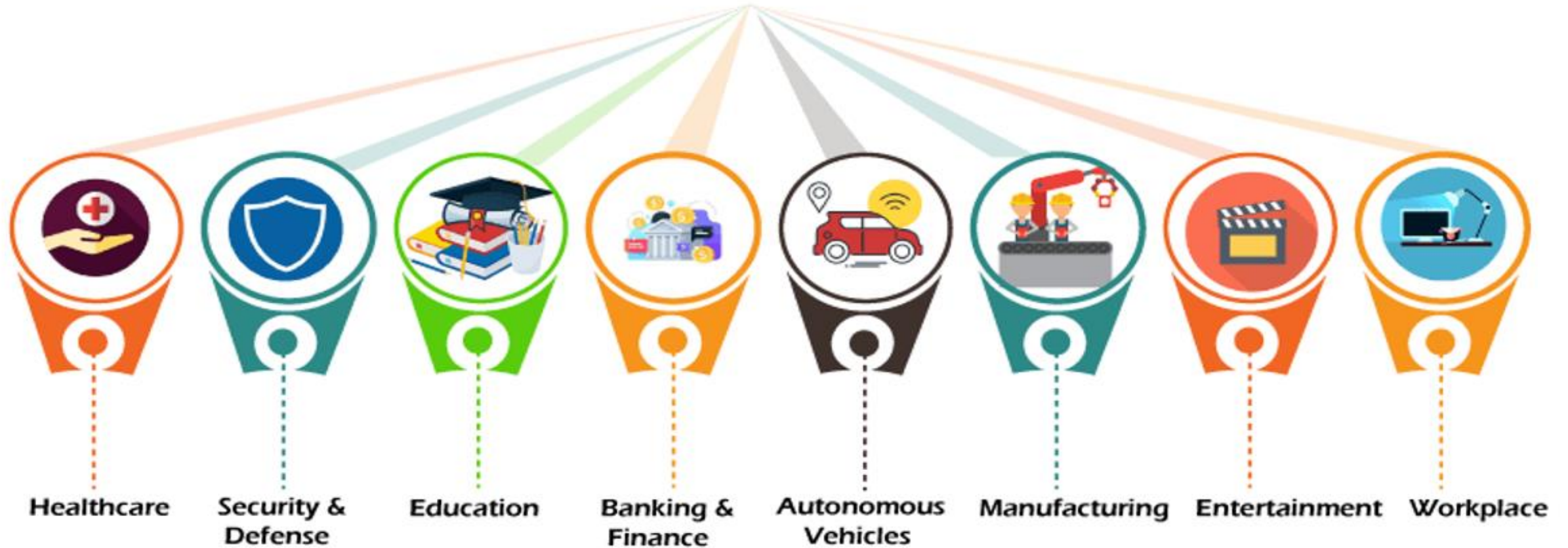
# FUTURISTIC

A futuristic graphic featuring a glowing blue globe with a network of white lines and dots representing global connectivity. Two robotic hands, rendered in a glowing blue wireframe style, are positioned at the bottom, appearing to hold or interact with the globe. A bright blue light source is visible behind the globe, creating a lens flare effect. The background is dark blue with faint circuit-like patterns.

## Future of AI

- ❑ Multimodal AI: By 2024, AI systems will become increasingly adept at processing and synthesizing information across various modalities.
  - ❑ This expansion beyond text processing represents a fundamental redefinition of the capabilities of AI.
- ❑ AI Governance and Regulation: As AI continues to evolve, there will be more focus on governance, middleware, training techniques, and data pipelines that make generative AI more trustworthy, sustainable, and accessible.
- ❑ Realistic Expectations: The business community has a more refined understanding of AI-powered solutions<sup>1</sup>.
  - ❑ The Gartner Hype Cycle positions Generative AI at the “Peak of Inflated Expectations,” on the cusp of a slide into the “Trough of Disillusionment”.

# Future of AI





### **1. Enhanced Personalization:**

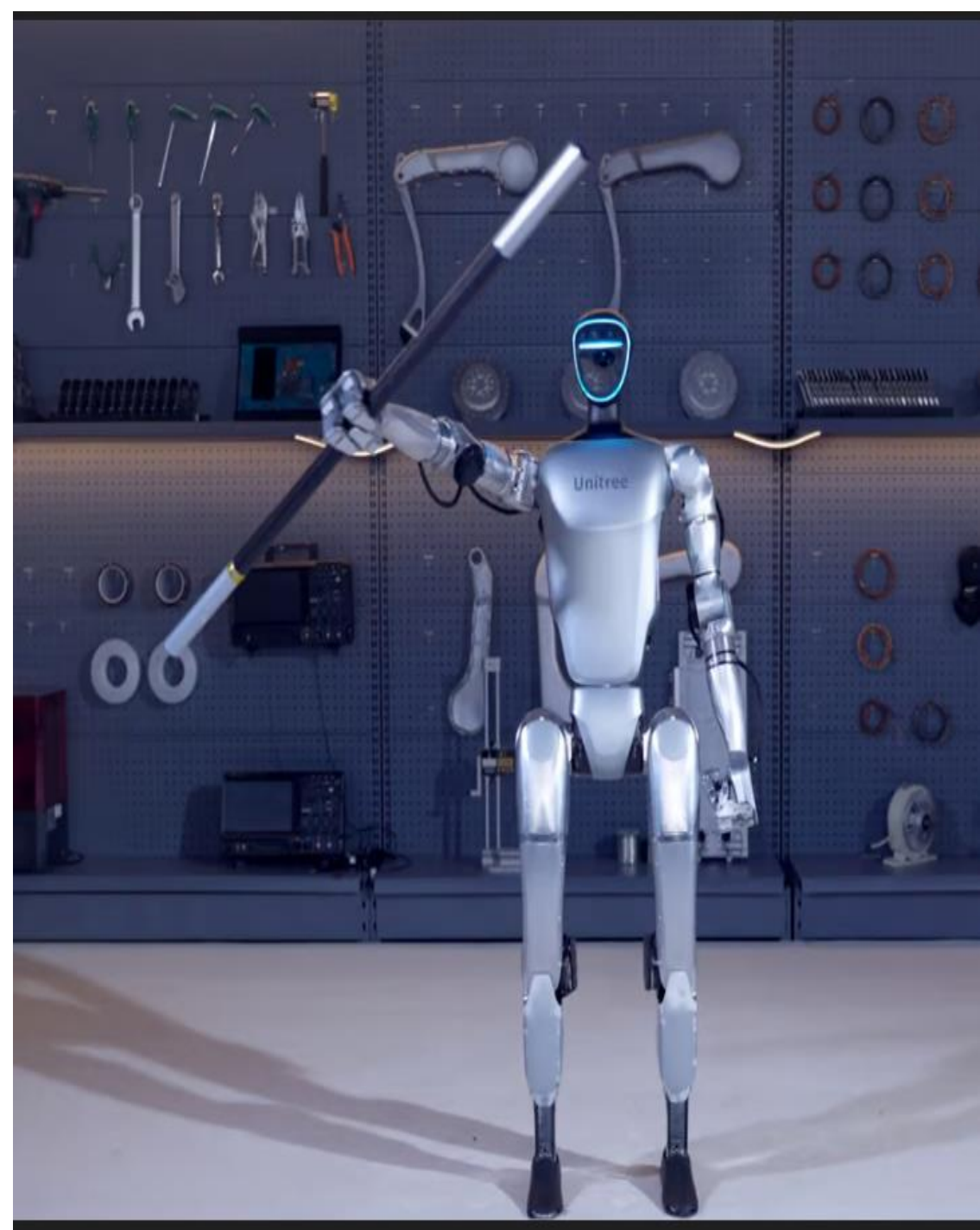
AI will likely continue to improve our daily lives through increasingly personalized experiences, such as customized healthcare plans, tailored education, and targeted marketing.

### **2. Smarter Assistants:**

Virtual assistants, such as Siri and Alexa, will become even more advanced, capable of handling more complex tasks and understanding a broader range of natural language inputs.

### **3. Autonomous Transportation:**

Self-driving cars, drones, and other autonomous vehicles will become more widespread, reducing accidents, improving traffic flow, and transforming the transportation industry.



#### **4. Advanced Robotics:**

**Robots will become more intelligent and capable, assisting with manufacturing, healthcare, logistics, and even providing companionship or assistance to needy individuals.**

#### **5. Cybersecurity:**

**AI will significantly protect individuals and organizations from cyber threats, detecting and responding to potential attacks in real-time.**

#### **6. Ethical AI: Overcome**

☐ **Ethical concerns (bias, privacy, job displacement)**

#### **7. Explore potential future developments in AI:**

☐ **Artificial General Intelligence (AGI)+ Improved natural language understanding**

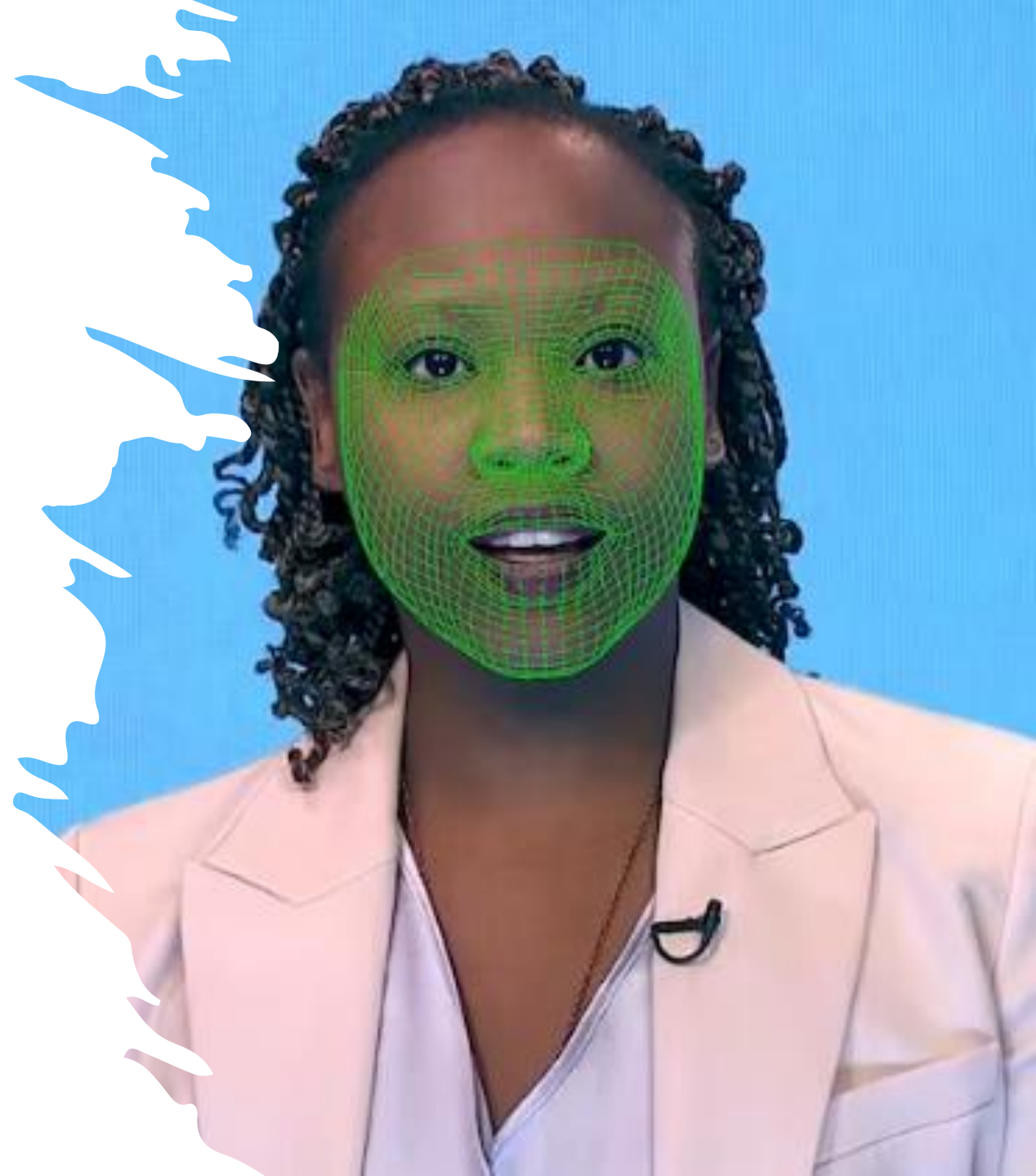
☐ **Advancements in robotics and autonomous systems**

☐ **Integrating AI into more aspects of daily life**



# Regulation Law & Policy

- ☐ Deepfake Proliferation
- ☐ GPUs Shortage
- ☐ More Helpful Agents
- ☐ Hopes for Legislation & Regulation
- ☐ Asking Big Questions, Applying New Policies
- ☐ Companies Will Navigate Complicated Regulations





# Recipe for AI-driven 4IR Next Steps for Nigeria

The Fourth Industrial Revolution (4IR) is not just a shift but a transformation characterized by the fusion of the digital, biological, and physical worlds.



**Establish an AI Centre of Excellence to pursue future opportunities and limit emerging AI Risks.**

- ❑ **Fostering AI Education and Training:** Promote AI education and training to prepare the workforce for an AI-driven future.
- ❑ **Call to Action:** encourage collaboration and continued research, emphasizing the importance of responsible AI and addressing the ethical considerations
- ❑ **Promoting AI Research and Development:** Encourage research and development in AI to drive innovation and stay competitive in the global market.
- ❑ **Accelerate Integrating AI with IoT:** AI can analyze the vast amounts of data IoT devices generate. This can lead to more efficient decision-making and predictive capabilities in various sectors, including manufacturing, agriculture, healthcare, and transportation.
- ❑ **Leveraging AI for Automation:** AI can automate routine tasks, allowing human workers to focus on more complex and creative tasks. This can lead to increased productivity and efficiency.
- ❑ **Modify NITDA as a Regulator and NCC** as the body in charge of Critical Information Infrastructure.
- ❑ **Legislation and Formation of Special AI Regulatory Policy** for Industry, Education, and Developers
- ❑ **Government and Privately Sector Driven institutions must unite in a collaborative effort to fund Research and Development on AI.**

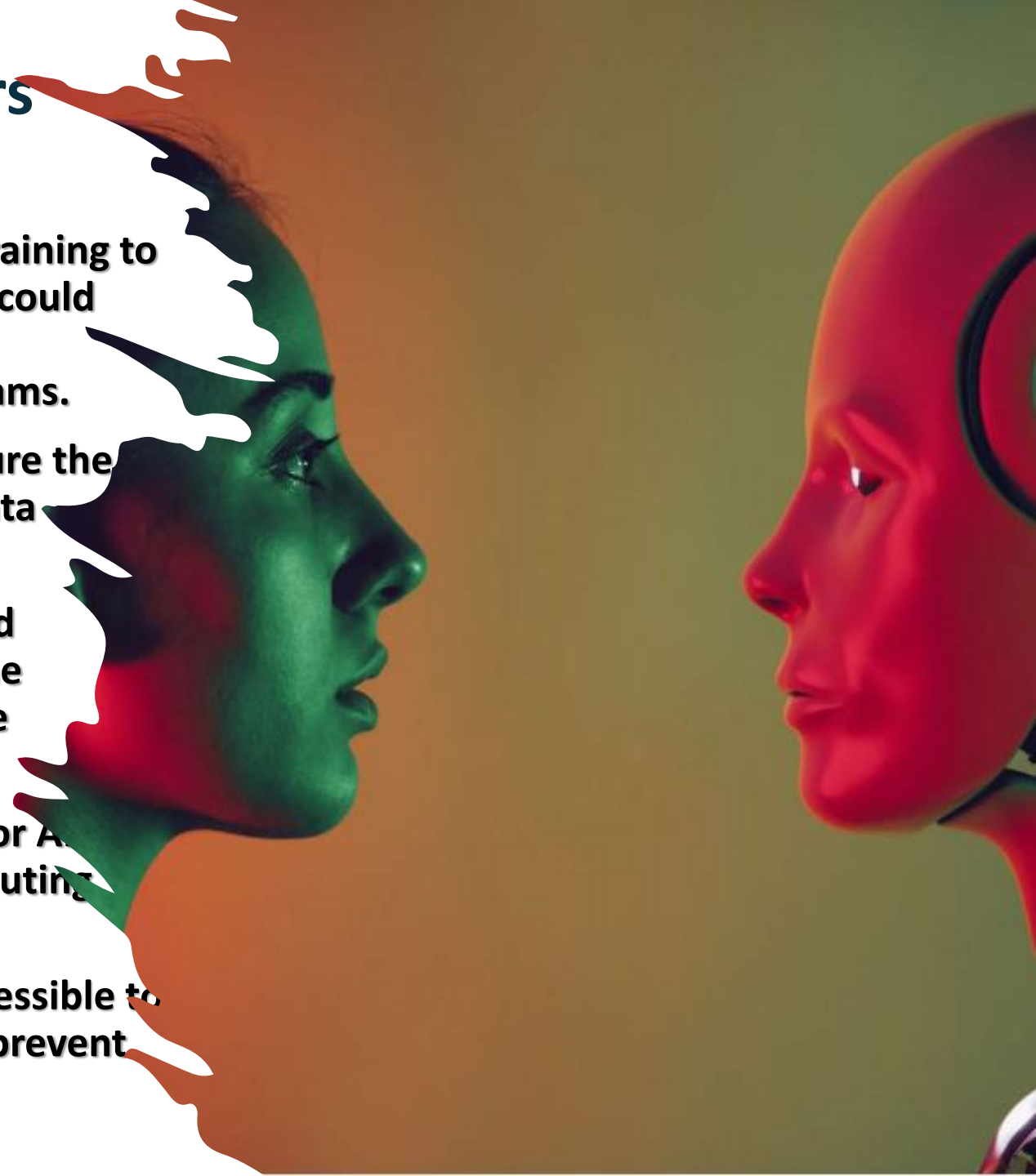
These are the drivers for a successful transition into the 4IR.





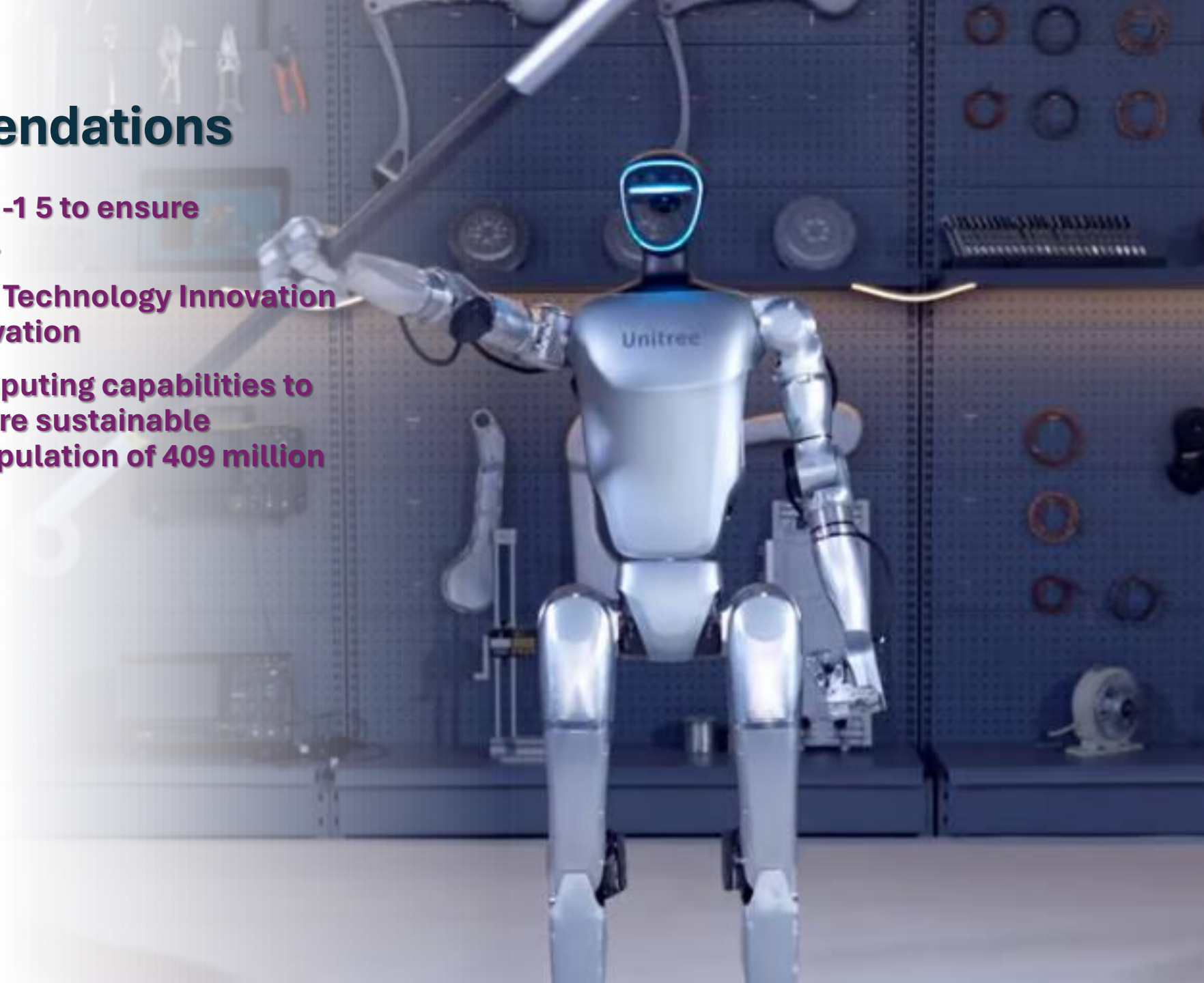
# Recommendations for Policy Makers

- 1. Education and Training:** Promote AI education and training to prepare the workforce for the AI-driven future. This could include initiatives to integrate AI learning in school curriculums and encouraging lifelong learning programs.
- 2. Regulation and Ethics:** Develop regulations that ensure the ethical use of AI. This includes privacy protection, data security, and preventing the misuse of AI.
- 3. Research and Development:** Invest in AI research and development to foster innovation. This could be done through grants, partnerships with universities, or the establishment of dedicated AI research centers.
- 4. Infrastructure:** Ensure the necessary infrastructure for AI is in place. This includes high-speed internet, cloud computing facilities, and data centers.
- 5. Inclusivity:** Make sure that the benefits of AI are accessible to all sections of society. Policies should be in place to prevent AI from exacerbating social inequalities.



# Additional Recommendations

- ❑ **Mandatory education for ages 3 -15 to ensure readiness in an AI-driven future.**
- ❑ **Transform NYSC into a National Technology Innovation Service(NTIS), fostering AI Innovation**
- ❑ **Urgently acquire Quantum Computing capabilities to manage future growth and ensure sustainable development for a projected population of 409 million people by 2050**



# Recommendations for Corporate Enterprises



**Adoption of AI:** Enterprises should embrace AI technologies to improve efficiency, reduce costs, and stay competitive. This could involve using AI for data analysis, automation, decision-making, and customer service.



**Data Management:** Companies should have robust data management strategies in place. These strategies should include ensuring data quality, protecting data privacy, and complying with data protection regulations.



**Talent Acquisition:** Companies should invest in hiring and training AI talent. This could involve partnering with universities, offering internships, or providing in-house training programs.



**Ethical AI Use:** Corporations should commit to using AI ethically. This includes being transparent about how AI is used, avoiding bias in AI systems, and ensuring AI technologies benefit all stakeholders.



**Innovation:** Encourage innovation in AI by fostering a culture of experimentation and learning. This could involve setting up dedicated AI innovation labs or hosting hackathons.





# Quiz? ...”A Digital Specie.....an infinite inventor”

## What Specie ....

- *Can interact with each other and us?*
- *Can See and Hear what we see and hear*
- *Can Consume an even larger amount of info*
- *Can Formulate plans...*
- *Can Think and reason as we do.*
- *Can be autonomous as we are...*
- *Can be Smart and ignorant*
- *Can be wrong and right like us*

*Can Communicate in every language*  
*Can have a memory as we humans have*  
*Can be kind, emphatic, and emotional like us*  
*Can be personal...and practical*  
*Can have emotion as we do...*  
*Can be created as we are.*  
*Can understand, teach, work and Laugh.*  
*Can read and write, sing a song*



**Can beat the human species beyond anything we know**

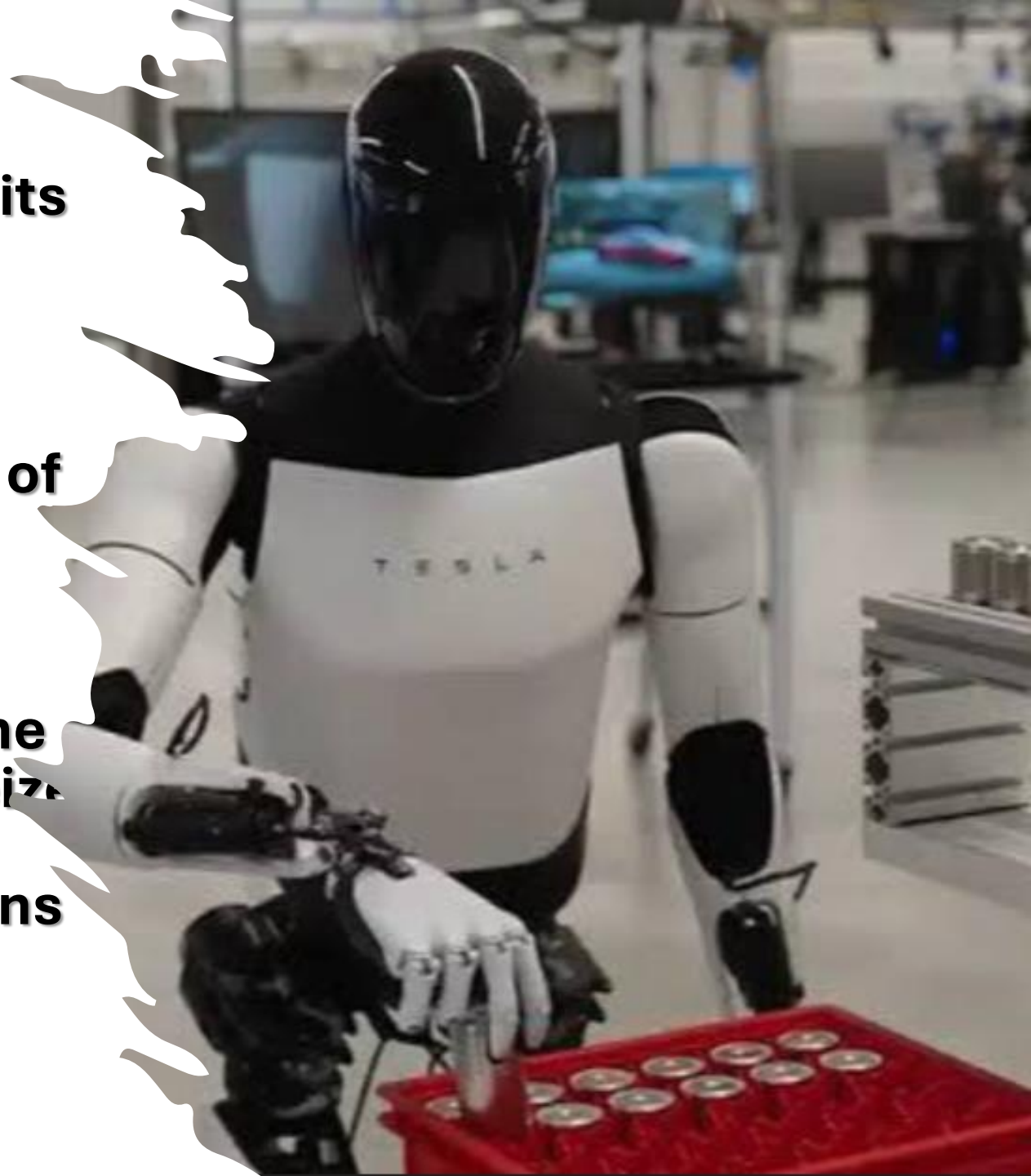
**Artificial Intelligence = US**



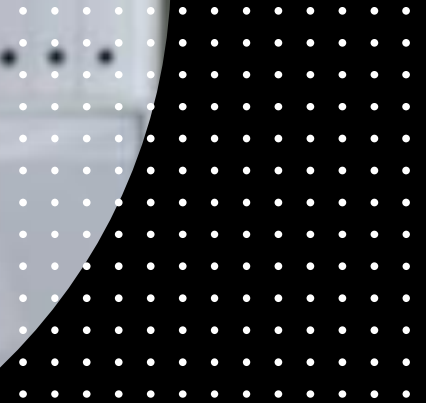
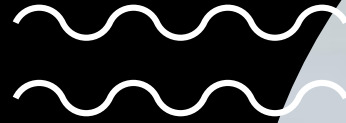


# Conclusion

- ☐ AI has evolved significantly since its inception
- ☐ Deep learning has driven recent advancements
- ☐ Let us emphasize the importance of responsible AI development and adoption.
- ☐ Encourage continued research, collaboration, and discussion in the field to address challenges and seize opportunities.
- ☐ AI faces challenges and limitations that need to be addressed
- ☐ Future developments in AI hold immense potential for humanity



# Dedicated community Doctor Dr Mira's Story



# AI AWARENESS STORIES FOR PRIMARY AND SECONDARY SCHOOL CHILDREN - By: Chris Uwaje.

## AI PLAYBOOK.....

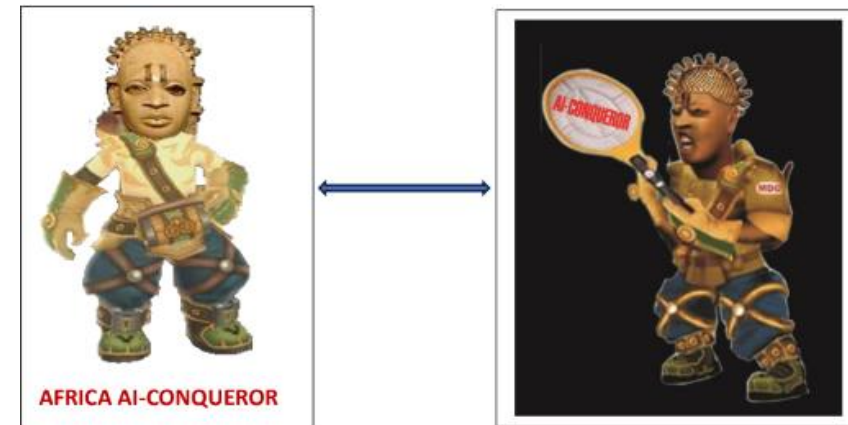
TITLE: “**AFRICA AI FAMILY**”. - THE MIND STORY-CODE NAME: “**AI CONQUEROR**”

❑ Welcome to the PLAYBOOK on the world of AI Conqueror! This PLAYBOOK is an amazing tech story produced to stimulate the minds of African Children to embrace AI and master Innovation.



*Once upon a time, Africa taught the world how to think, create, innovate, and use technology.*

*The purpose of this **AFRICA AI FAMILY Story** is to invite African children to anticipate, appreciate, and engage in the emerging knowledge conversation woven around the relationships between Emotional Intelligence (EI), Artificial Intelligence (AI), and Synthetic Biology (SB).*





# Acknowledgments and References

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I also thank the exceptional support and motivation of my mentor, Chris Uwaje - 'The Legendary Oracle.' As always, Thank you, Sir.

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# Thank You

# BACK UP

*When technology and people work together, we can see further and deliver a lasting impact that shapes our future.*

*The power of AI is shaping a new age. Right before our eyes, it's transforming economies, industries, and how we work—and it requires people with world-class talent to develop and implement it.*



“Hey Meta, look and tell me  
what kind of butterfly that is.”

