

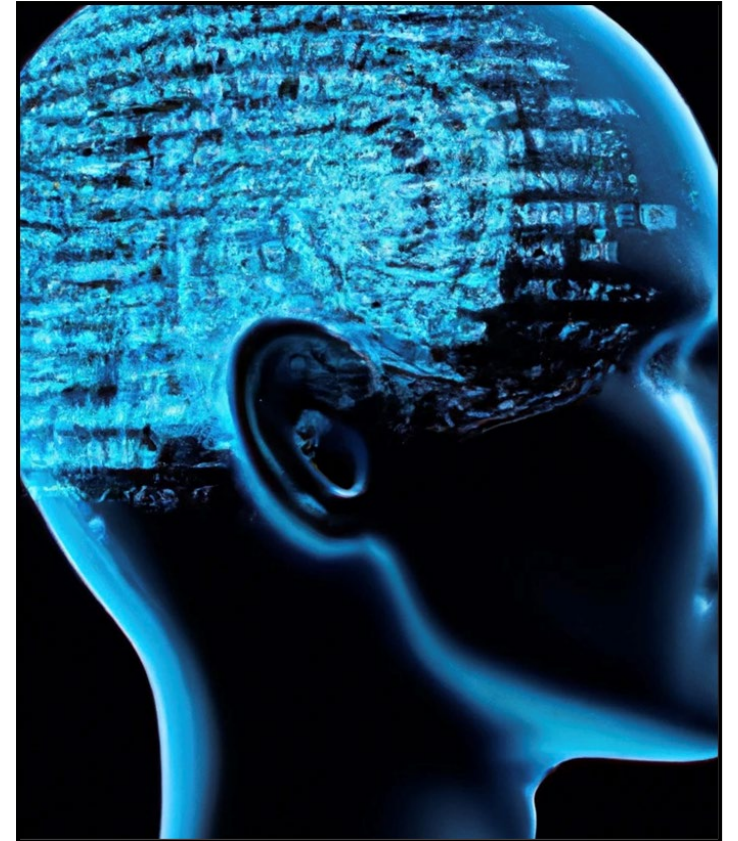


Trends in Artificial Intelligence

An Introduction

Zara Khan and Art Robbins

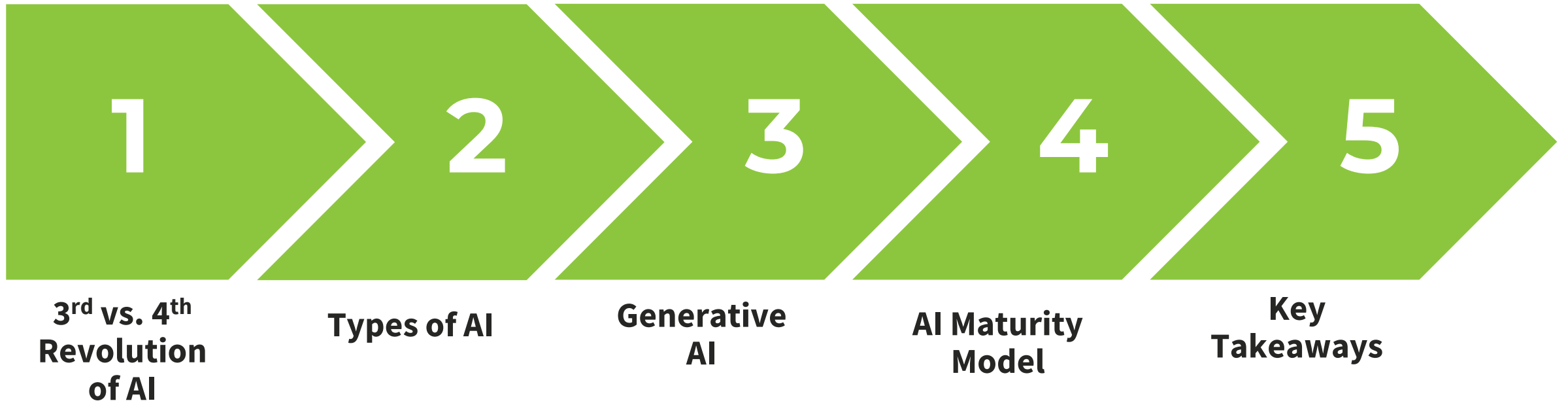
EMCEE, LLC



Mission of this Document

- **Artificial intelligence has progressively been adopted** by numerous companies.
- The **breakthrough of ChatGPT**, introduced by OpenAI, has driven an increase in interest and a spike of consumer demand.
- EMCEE believes it is critical to **gain a key understanding of what these powerful tools are**, and how best to optimize them for businesses.
- This series will break down **Generative AI**, focusing on the competitive landscape, key players and growth opportunities.
- This will form a key foundation to **understand the potential applications** of Generative AI and how they will develop in the following years.

Content





Artificial Intelligence:

The programming of machines that uses the simulation of human intelligence to replicate human behavior and cognitive activity.



3rd Revolution of AI

1950

An informative guideline for AI was formed by Alan Turing's paper "Computing Machinery and Intelligence"

1955

An AI program to imitate the problem-solving skills humans acquired creating the programming language names IPL

1957 – 1974

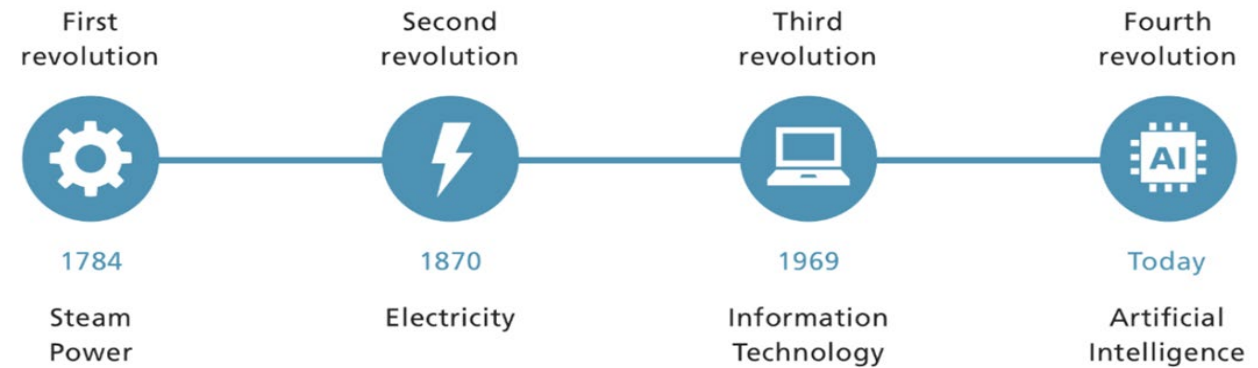
Computer Intelligence rapidly accelerated with developed machine learning algorithms

1980s

Fifth generation computer project further funded remodeling of computer programming

1990s - 2000s

AI progression saw breakthroughs such as IBM chess playing program (Deep Blue) that beat the Grand Master in a championship



The 3rd revolution focused on automating specific step-by-step rules to perform tedious and complex actions.

4th Revolution of AI

Utilizes adaptive computer systems and software to enhance:

- 3rd Revolution AI
- Robotics
- The Internet of things
- 3D Printing and more

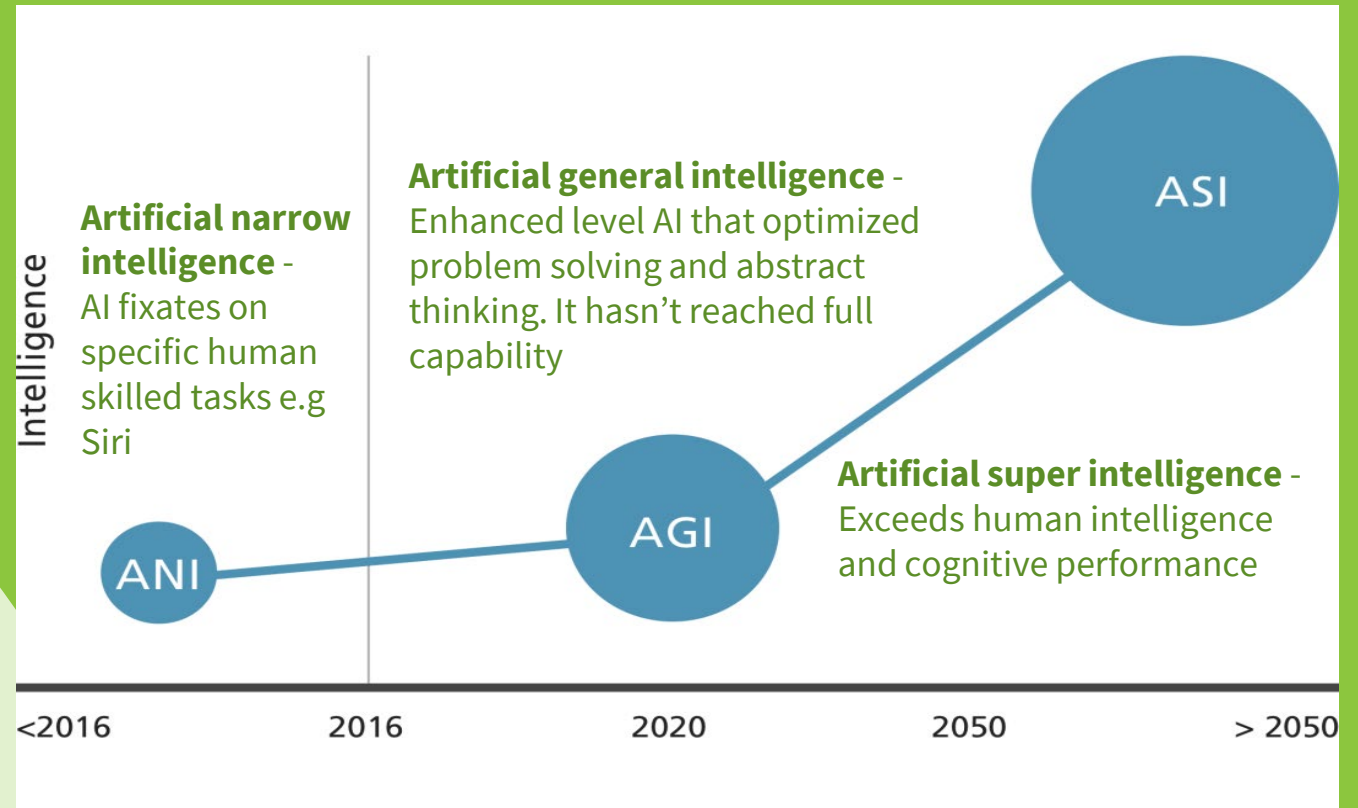


This revolution goes beyond automation, using advanced technology to transform businesses and creating personalized consumer relationships.

Types of Artificial Intelligence

- The global AI market is estimated to be worth \$120B in 2022 and is expected to grow more than 10x to \$1600B by 2030.
- According to the IBM Global adoption index of 2022, 42% of firms want to explore AI, while 35% are already using it within their business

Generative AI is currently exhibiting Artificial General Intelligence traits, and will evolve to eventually exhibit Artificial Super Intelligence



Generative AI

Limitations

- High costs to implement
- Trained data generates bias behavior
- Requires safety checks to avoid false outputs (i.e., hallucinations)

Benefits

- Rule based models reduces errors
- Strong capabilities to understand and learn patterns and data sets
- AI offers consistency and longevity

LAYERS OF AI FUNCTIONALITY

EXAMPLES

Open-AI-GPT 4, Chat GPT, DALL-E 2, Codex

TYPES OF GENERATIVE AI

Text generation: Enhance interactive text in the form of LLMS (Large language models)

Image generation: Multimodal AI program that analyzes links with various data to form visual outputs

Coding generation: Machine learning system that transforms text into code

GENERATIVE AI

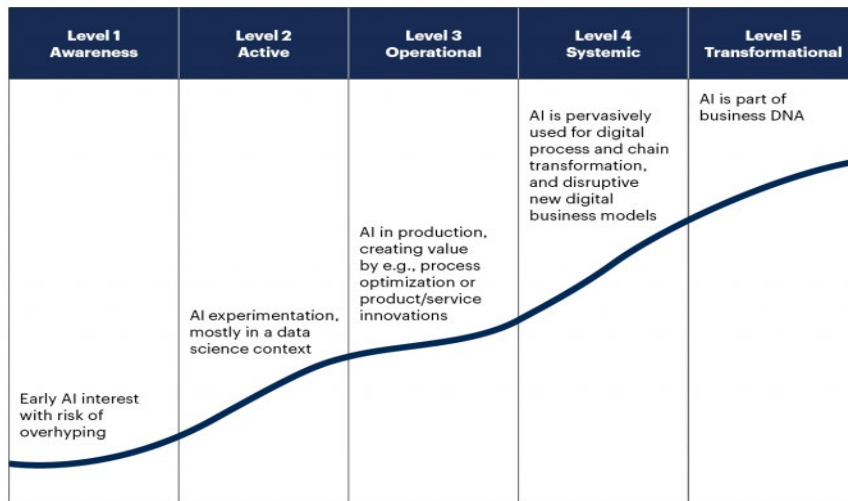
Uses trained data to generate different outputs with GANS (Generative Adversarial Networks) such as images, videos, text, and audio

MACHINE LEARNING

Expands on the growth of algorithms and analyzes the data to create predictions

AI Maturity Model

AI Maturity Model



gartner.com/SmarterWithGartner

Source: Gartner
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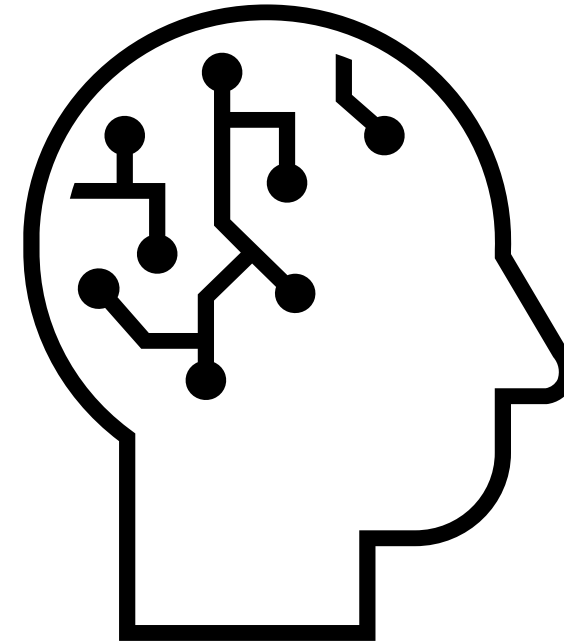
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- AI Maturity models identify each stage of AI adoption
- Most firms are in level 2 or 3
- Generative AI is expected to accelerate firms level of maturity
- Over 500 AI Startups have raised over \$11B (excluding OpenAI) according to Pete Flint of NFX

Indicates a growing trend within the market as businesses are finding it critical to optimize and adopt generative AI tools

Key Takeaways

- The breakthrough of ChatGPT has accelerated mass interest in Generative AI and creates huge potential for businesses.
- Given the state of Generative AI, it is critical to utilize it as a **tool** to enhance solutions and not as the creator of the ultimate end product
- Generative AI is still in the development stage as it still offers limited capabilities
- Adoption of Generative AI is heavily dependent on its application to high value use cases.



**Next topic: Deeper look into
Generative AI**

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