

# Artificial Intelligence Education



**Basics of AI**  
**Defining AI and Intelligence**

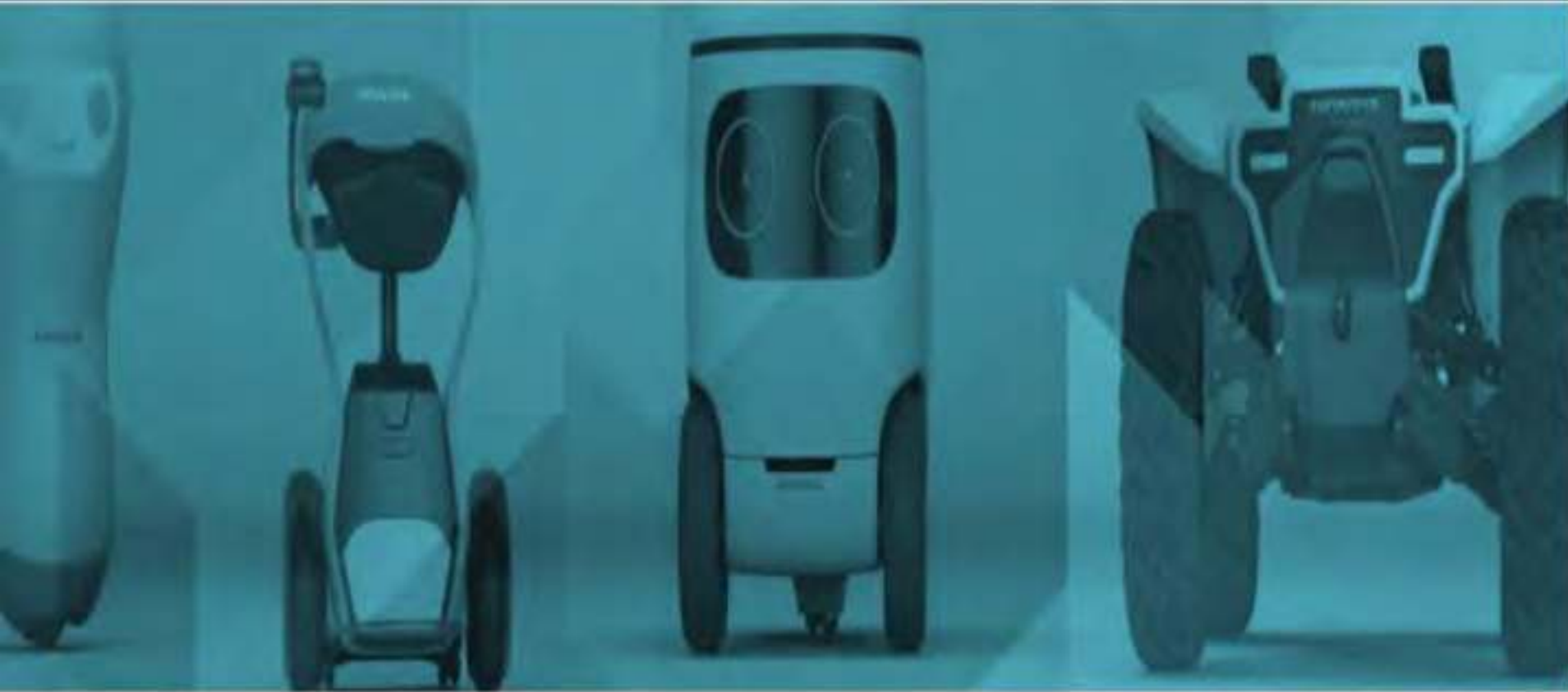
**Awareness towards AI**

**AI tools and resources**  
**Challenges and Benefits**

**Staying meaningful while**  
**being productive**

# BASICS OF AI

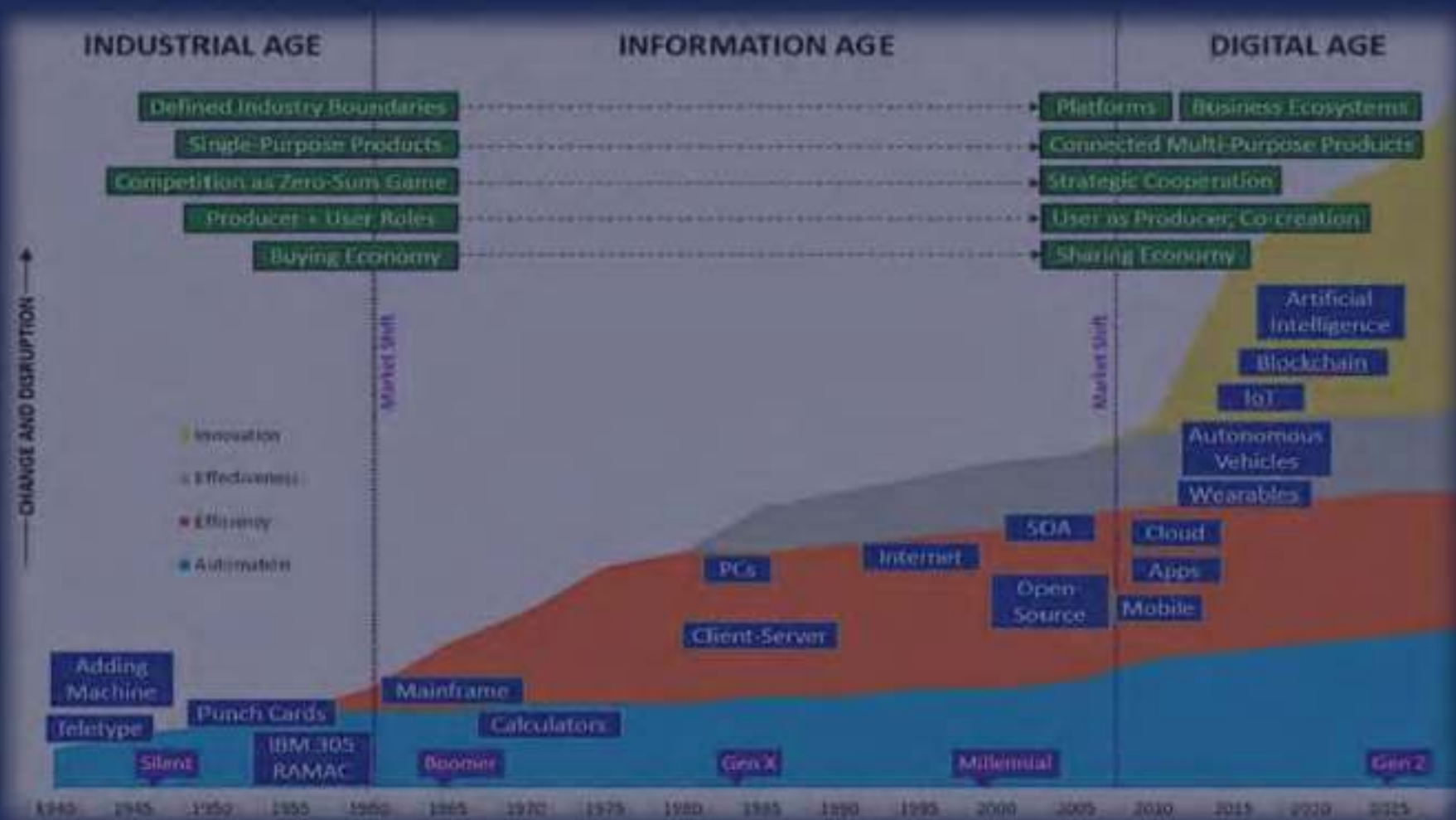
**“AI IS LIKELY TO  
BE EITHER THE BEST  
OR WORST THING TO  
HAPPEN TO HUMANITY.”  
-STEPHEN HAWKING**



## SO.... WHERE DO WE STAND TODAY?

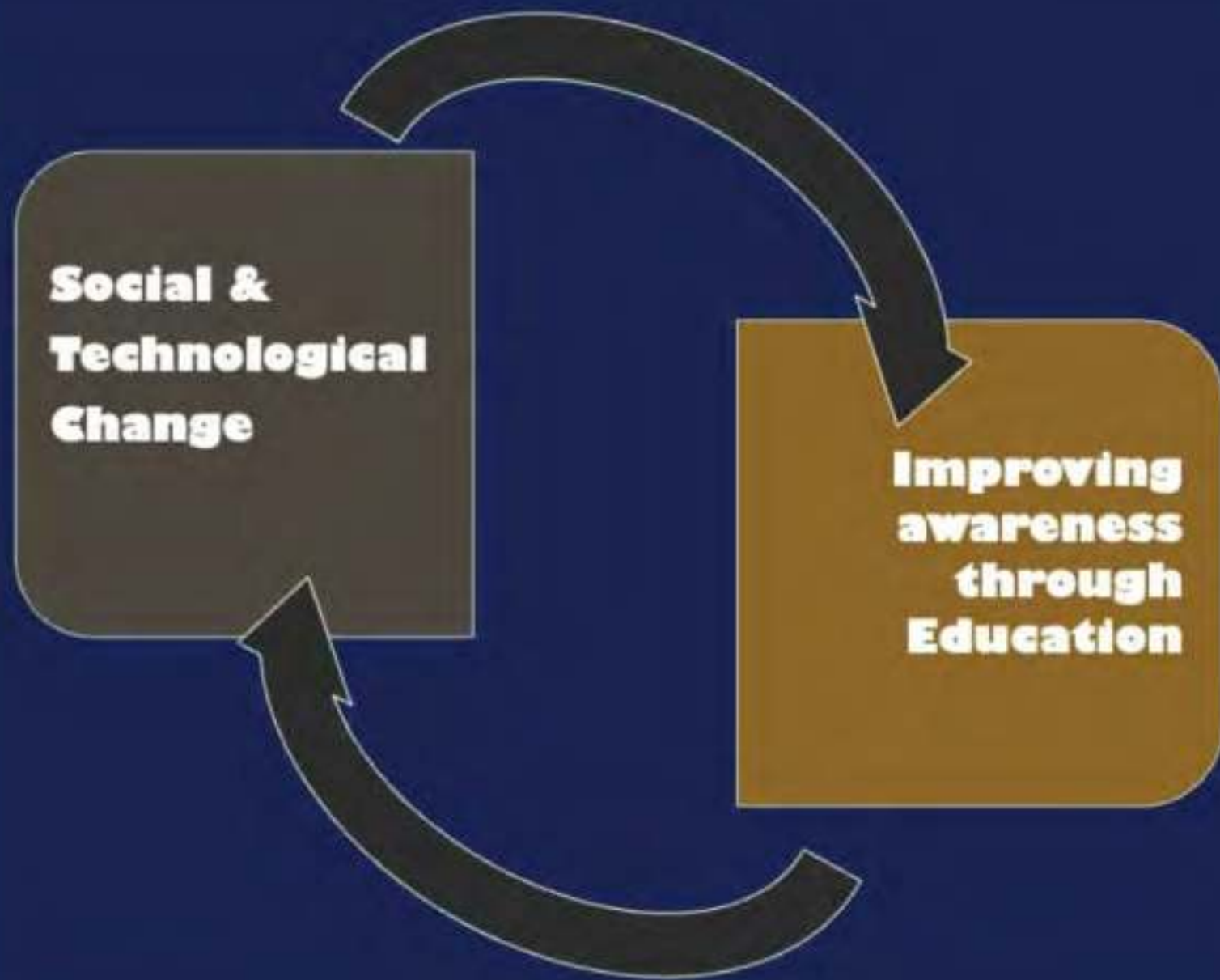
As machines increasingly complement human labor in the workplace, we will all need to adjust to reap the benefits.

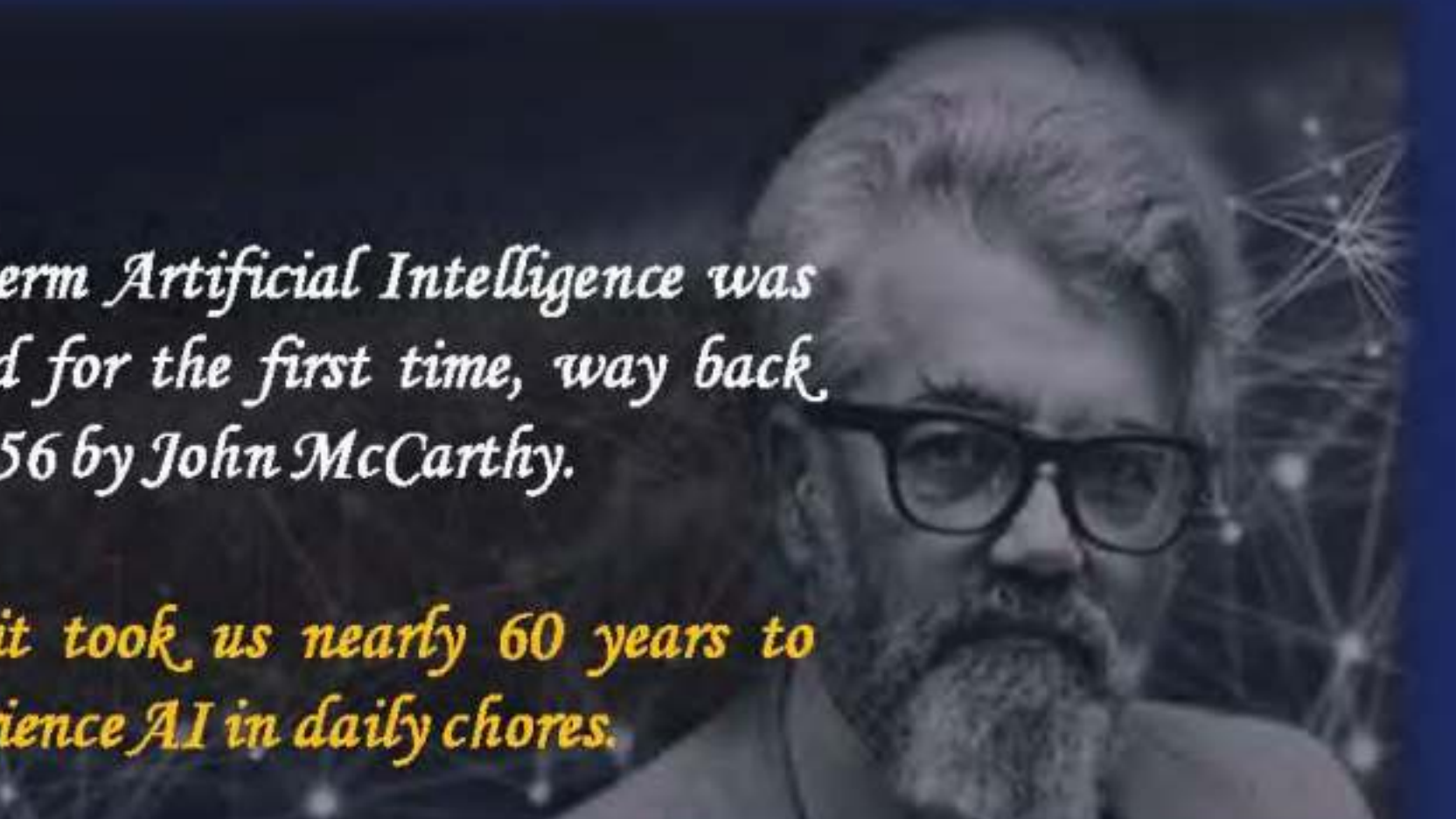
McKinsey Global Institute 2018



# MACHINE EVOLUTION

## Manual-Automatic-Autonomous





*The term Artificial Intelligence was coined for the first time, way back in 1956 by John McCarthy.*

*But it took us nearly 60 years to experience AI in daily chores.*



# INTELLIGENCE

The ability to accomplish complex things

(Tegmark, 2017)



**EXPERIENTIAL**

**DESIGNED &  
ENGINEERED**

# AI

## **SUPER AI**

Machines that are an order of magnitude smarter than humans

## **GENERAL AI**

Takes knowledge from one domain transfers to other domains

## **NARROW AI**

Dedicated to assist with or take over specific tasks



# NARROW AI

- Weak or Focused AI
- Designed to perform a **single task** or a **narrow range of tasks**.
- Trained on a large dataset of data specific to the task they are designed to perform.



- **Virtual Assistants**

Siri, Alexa, Google

- **Facial Recognition Software**

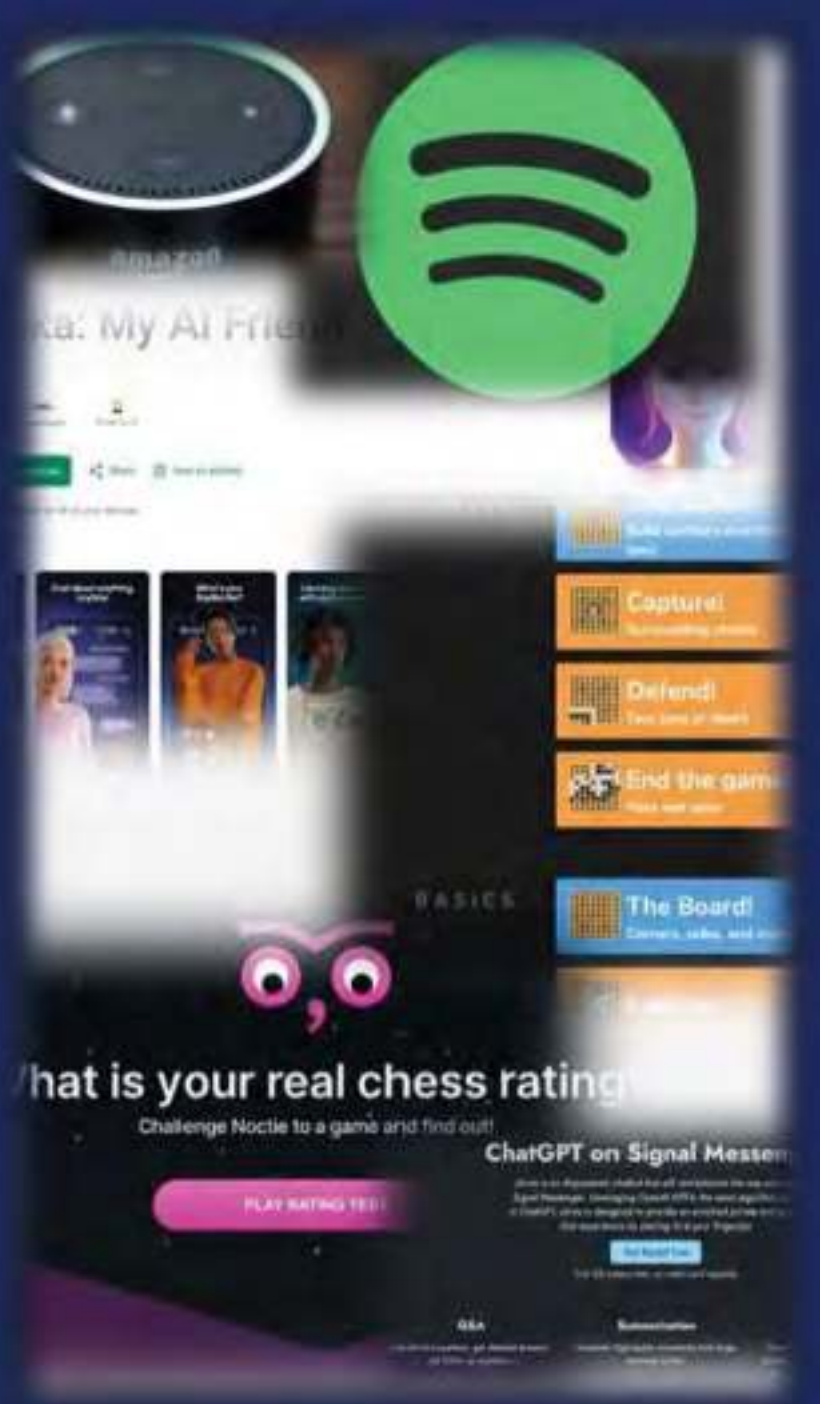
- **Self Driving Cars**

- **Conversational Chatbots.**

CHATGPT 3.5/4; Google Bard,  
MS Bing, Replika; JARVIS (Signal)

- **Game Playing AI**

F.E.A.R; AI WAR  
Noctie.ai; The Last of Us  
Halo: Combat Evolved  
Minecraft; GTA 5





# GENERAL AI

- Strong or Full AI
- For now Hypothetical
- Able to understand or learn any intellectual task that a human being can.
- Still a long way off?

Some AI systems are starting to exhibit some such characteristics

- Google AI language model, **LaMDA**:  
generate text, translate languages, write creative content, questions in an informative way.
- **GPT-3**:  
Large language model (OpenAI).  
Generate text, translate languages, creative content.

## POTENTIAL HAZARDS



- > The possibility of becoming so intelligent surpassing human control <
- > Malicious use: creating autonomous weapons <
- > Social and economic disruption from the widespread adoption <



- > Solving complex problems currently beyond the reach of human intelligence <
- > Creating machines to help with tasks such as healthcare, education, and transportation <
- > Expanding our understanding of the universe and ourselves <



## POTENTIAL BENEFITS



# SUPER AI



A hypothetical type AI surpassing  
human intelligence in all aspects.

Inherently able to learn, reason, and solve problems better  
than any human.



# Awareness about AI in Education

3

### **INNOVATION**

Enhances Personalisation

Tailored Learning

New Educational Experiences

2

### **RELATIVELY NEW TECHNOLOGY**

Tech development > school culture

Complex

Infinite Potential. Variable

1

### **AWARENESS**

Low Overall

High awareness with Younger Adults

and those in/with HE

**Translate**

# BENEFITS vs CHALLENGES

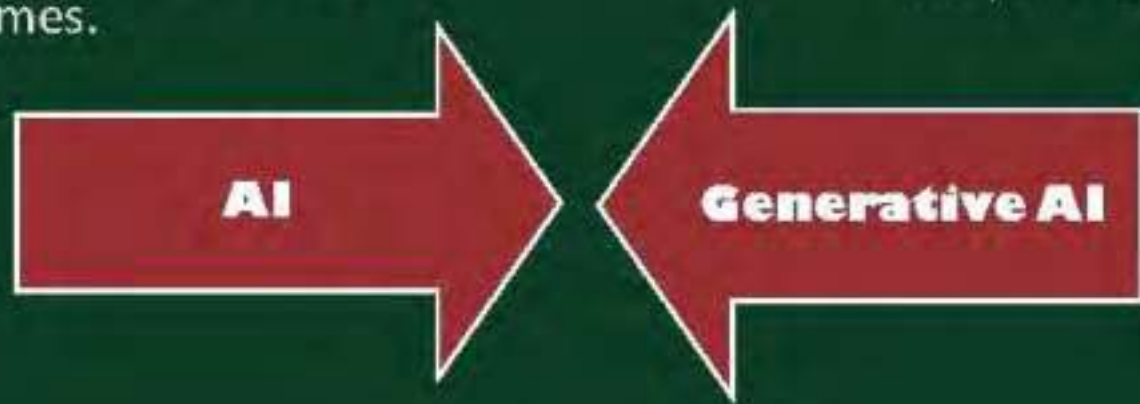
ENHANCE EDUCATION WITH  
WHAT MAKES US HUMAN

CREATIVITY  
EMPATHY  
SYMPATHY  
SUBJECTIVITY  
TEMPERAMENT  
ENJOYMENT  
ORIGINALITY  
RESPONSIBILITY OF CONTENT  
SATISFACTION  
EMOTION  
EXPOSURE  
DETERMINATION

# CHALLENGES & BENEFITS OF **GENERATIVE AI**

Designed to perform specific tasks, such as classifying images, translating languages, or playing games.

Designed to create new content, such as images, text, or music.



FEATURE	AI	GENERATIVE AI
<b>Goal</b>	Perform specific tasks	Create new content
<b>Capabilities</b>	Classify Images, Translate Languages, Play Games	Generate Images Text Music
<b>Examples</b>	Self-driving cars Spam filters Medical Diagnosis	BARD Search Generative Experience Craiyon Bing Image Creator

Craiyon is a free AI image generator that can create a variety of images from text prompts. It was formerly known as DALL-E Mini, and it is still under development. Images generated may not always be perfect.

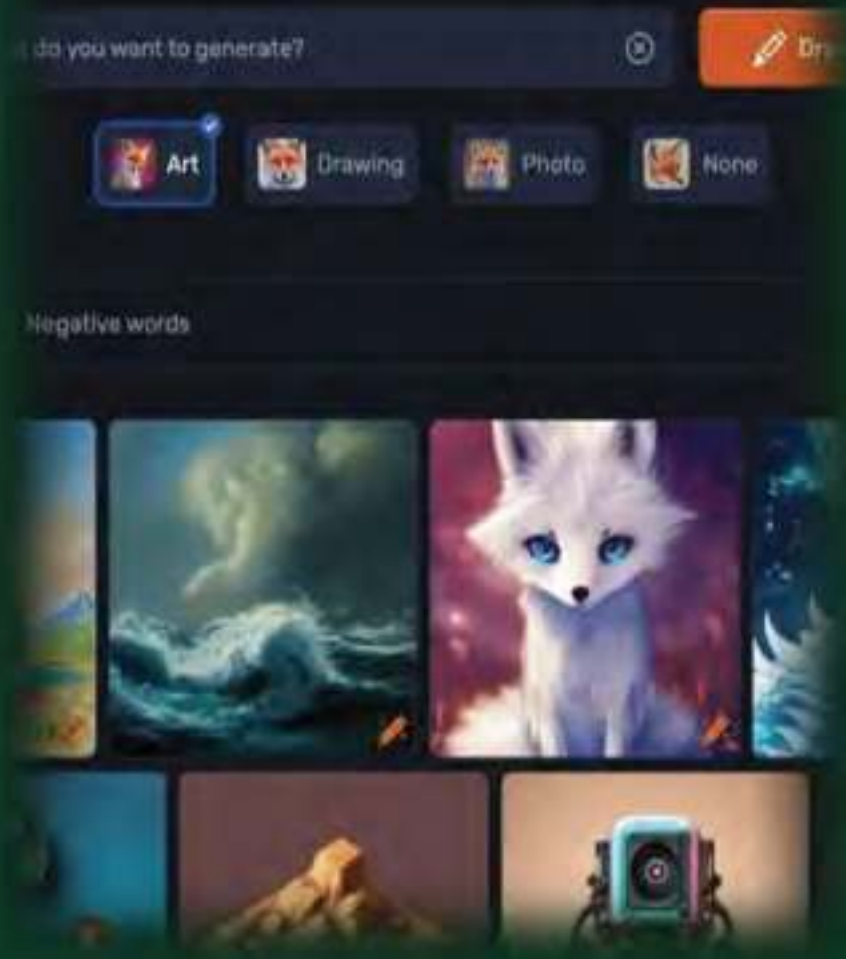
Bing Image Creator is a tool that uses artificial intelligence to generate images based on your text descriptions. It is currently in beta and only available to Microsoft Rewards members.

• Midjourney (through Discord) can produce marketing copy and sales emails based on user-given keywords or topics. It can help marketers and salespeople create engaging and effective content for their campaigns.

• Google Bard is a large language model chatbot developed by Google AI. It is similar to ChatGPT, powered by a language model to converse with users. However, unlike ChatGPT, Bard has the ability to access the Internet and include information scraped from recently-published content in responses. It can generate text, translate languages, write different kinds of creative content including original songs in different genres and styles.

# Craiyon

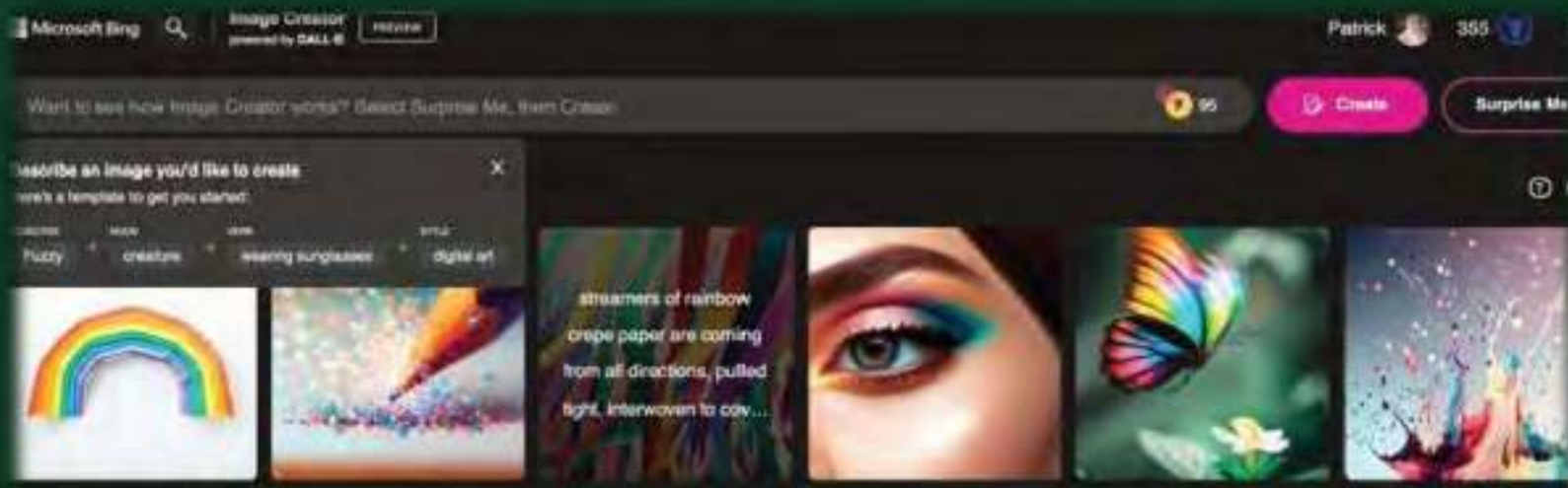
Create AI Art with our free AI image generator.



- Similar to DALL-E
- Trained on a smaller database. Not as precise as DALL-E 2.
- Faces may look smeared and indistinct
- It is free and unlimited.
- Content range is unrestricted in regard to adult or political subject matter.
- Craiyon also provides a forum to share your results with the world.



# BING IMAGE CREATOR



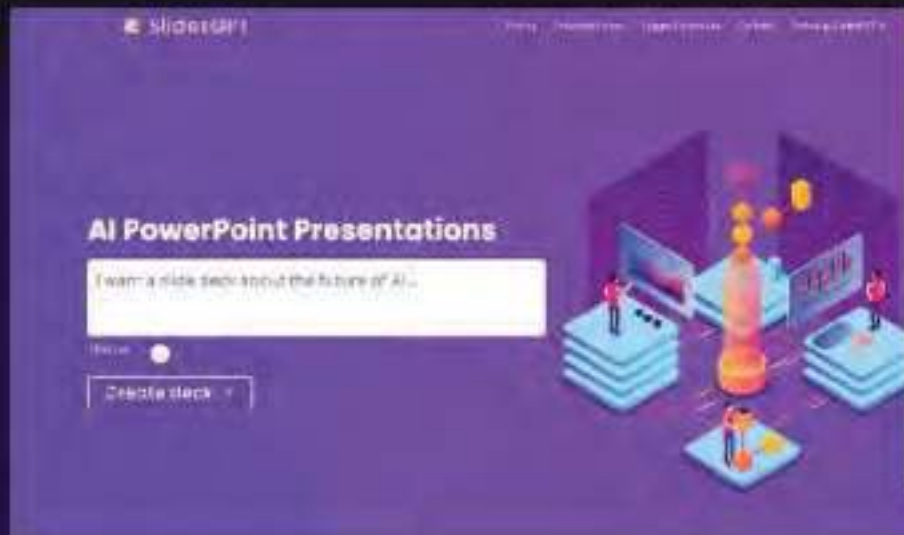
- Bing's image creator uses DALL-E under the hood.
- Bing Image Creator for free with a reasonable usage limit that replenishes every week.
- Using it is simple too; just enter a text-based prompt and get four images within a matter of seconds.
- You can't change any settings or dials.

# 1. GAMMA APP



- An app that lets you create beautiful and engaging presentations docs and webpages with AI
- Free 400 credits.
- Downloadable as pdf or ppt

## 2. SLIDESGPT



No registration. Always free, no subscription. Credits & money for free, pay only when you download it.

Free Plan	Pro Plan (Annual)	Enterprise (3000)
\$0	\$2.50	\$500 \$0.50
• Unlimited presentations • Unlimited slides per presentation • Unlimited AI credits • Unlimited AI credits • Unlimited AI credits • Unlimited AI credits	• Unlimited presentations • Unlimited slides per presentation • Unlimited AI credits • Unlimited AI credits • Unlimited AI credits • Unlimited AI credits	• Unlimited presentations • Unlimited slides per presentation • Unlimited AI credits • Unlimited AI credits • Unlimited AI credits • Unlimited AI credits
Download from AI to PDF	Pay (only when you download)	Pay (only when you download)

Web-based.

Generating slides from text prompts or pasted text.

Presentation includes text, images, charts, and graphs.

Customize by adding or removing content, formatting, adding images and graphics.

A good option if you are not very familiar with PowerPoint.

# 3. BEAUTIFUL.AI

- Create beautiful and engaging presentations quickly and easily.
- Generate slides from your text.
- Customize presentations by adding images, charts, and graphs.
- Create presentations that are both visually appealing and informative.

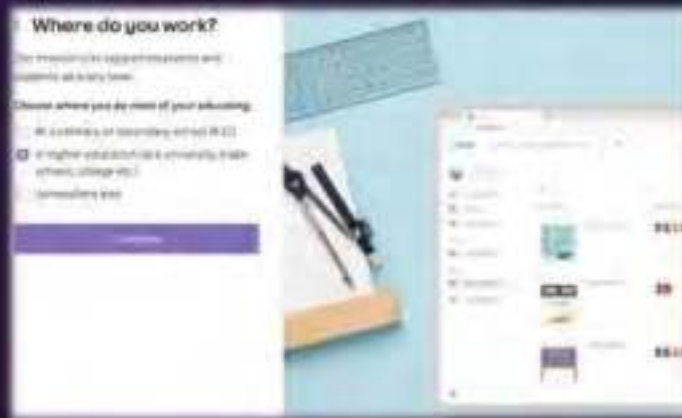
Create beautiful presentations 10x faster.

The screenshot displays the pricing page for Beautiful.AI, featuring three subscription plans: PRO, TEAM, and ENTERPRISE. Each plan includes a price, a 'Get it now' button, and a list of features. The PRO plan is priced at \$12 per month, the TEAM plan at \$40 per month, and the ENTERPRISE plan is priced 'Starting at \$1000 per year'. The features listed for each plan include AI-powered design, customizable themes, and various presentation options.

Plan	Price	Key Features
PRO	\$12 / month	AI-powered design, Customizable themes, 100+ presentation options
TEAM	\$40 / month	AI-powered design, Customizable themes, 100+ presentation options, Collaborative editing, Shared presentation library
ENTERPRISE	Starting at \$1000 per year	AI-powered design, Customizable themes, 100+ presentation options, Collaborative editing, Shared presentation library, Custom branding, Single sign-on, Advanced analytics, Dedicated account manager



1



2



3



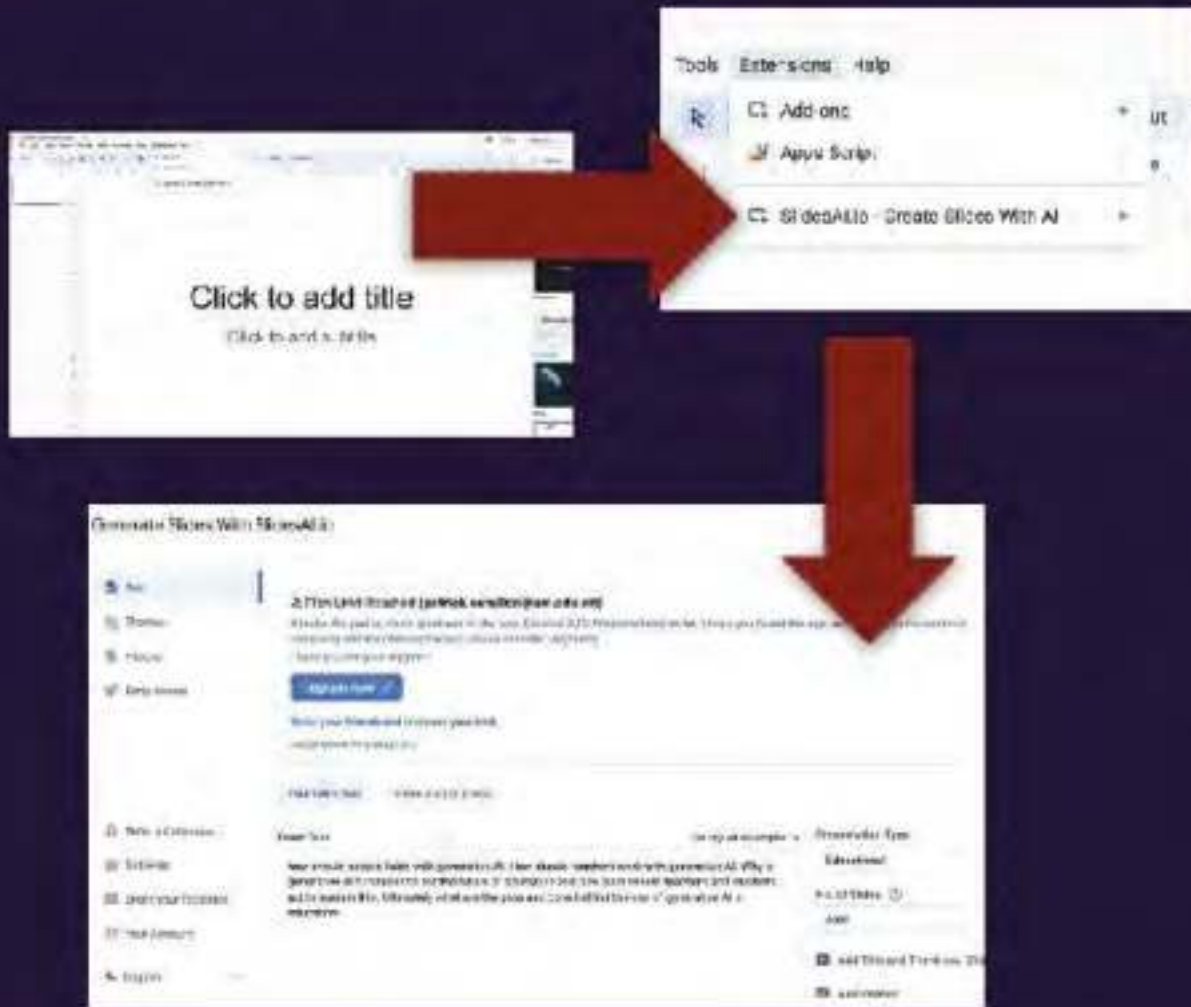
## 4. CANVA

Allows users to create designs without any prior design experience.

Offering a wide variety of templates, fonts, and features to create presentations, social media graphics, flyers, and more.

Create professional-looking designs quickly and easily.

# 5.Slidesai.io



AI-Powered tool that transforms any text into visually appealing slides, saving you hours of time and effort

A Google slides extension

Choose from a variety of presentation types and colour



# 6.Slidesgo

- Think of a topic
- Choose preferred style and tone
- Make desired changes
- Download product for free





# CHATBOTS

**A software application that can simulate conversation with human users.**

38



**Answer questions and resolve issues without the need for human intervention.**

**Absent of emotions, beliefs desires or experiences.**

**Used in entertainment applications, where they can provide companionship or play games with users**

**They do not understand the content they are processing**

**Responses may look insightful but it is the result of algorithms**

**Personalized instruction or tutoring.**

**Lack of ability to reflect**



	ChatGPT 	ChatGPT + 	Claude 2 	Bard 	Bing Chat 
<b>Creativity</b>	+	+++	+++	++	++
<b>Rapidity</b>	+++	++	++	+++	+
<b>Relevance</b>	++	+++	+++	++	++
<b>Accuracy</b>	++	++	+++	+	++
<b>Up to date</b>	+	+	++	+++	+++
<b>Cost</b>	Free	\$20 /mo	Free	Free	Free



**ChatGPT**



**Bard AI**

## Similarities

## Differences

LLMs trained on massive datasets of text and code

**Bard Dataset:** The Internet, Scientific papers  
Math expressions and Code.

**ChatGPT:** Text dataset from Internet only

Generate: Text, Creative Content

**Bard:** Private Beta

**ChatGPT:** publicly available

Translate languages

**Bard** is free

**ChatGPT** has a paid tier

Answer Questions in informative ways

**Bard** processes real world info through Google search (better for research)

**ChatGPT** better in generating text

In continuous development and continuously learning to perform many kinds of tasks

**Bard** less user friendly but more informative with recent access to information

**ChatGPT** more easy to understand but limited on 3.5 version



# CHATBOTS

## Bard

Google Bard Review

●●●●○ 4.0 Excellent


Best for Productivity

## Bing

Microsoft Bing Chat Review

●●●●○ 3.5 Good

Best for Bing and MS Edge Users

 OpenAI

ChatGPT Review

●●●○○ 3.0 Average

Best for AI text Generation

PCMag 2023

# **Q&A. Making Chatbots valid**

INCONSISTENCIES

*due to probability*



UNPREDICTABILITY

*proof of lack of understanding*



TECHNICAL, *yes.*

ARTISTIC, *definitely*

**Misleading content**

**Disinformation**



*Simple commands may not always suffice.*

*Employ more nuanced prompts to achieve their desired outcomes.*

# CHATBOT PROMPTS

## Increasing their Effectiveness

### 1. Simplifying complex notions (Oversimplification of technical terms)

**Prompt:** I want to learn about (insert specific topic).

Explain (insert specific topic) in simple terms. *"Explain to me as if I am 15 years old."*

### 2. Generating the perfect marketing plan

**Prompt:** "I need help creating an advertising campaign for (insert description of service or product)"

*"I want you to act as an advertiser.* Create a campaign to promote (a product or service). Choose a target audience, develop key messages and slogans, select the media channels for promotion, and decide on any additional activities needed to reach your goals. "

### 3. Expert Consulting

**Prompt:** "I will provide you with argument **(insert desired topic)** or opinion of mine. I want you to criticise it as if you were **(name of person)**"

### 4. Job interview simulations

**Prompt:** "I am looking for this job **(insert specific job role)** and you are the interviewer.

Ask *me* appropriate questions as *if you were the interviewer*. We will do Q&A  
Only ask the following question once I have reply."

### 5. Make the chatbot write like you

**Prompt:** **[Insert Text]**

Write about **(insert text topic)** as the above author would write.



# SOLUTIONS

Enhancing Questions with what makes us human.

*Creativity, Contextualisation, Feelings*

Example in context of **Sea pollution.**

a. How will pollution influence fish population?

**OR**

b. Picture yourself diving into the clear blue waters around the Maltese Islands. As you marvel at the kaleidoscope of colours and light playing on the seabed the small fish moving in between the seaweed, what would be the effect of pollution on all of this?

## Answer to a.

Pollution can harm fish in a variety of ways, including by disrupting their development, reproduction, and immune system.

Oil spills, sewage, nutrient pollution, and noise pollution can all have a negative impact on fish populations.

Pollution can lead to decreased fish populations, changes in fish behaviour, and increased fish deformities.

It is important to take steps to reduce pollution and protect our fish resources. Some of the things that can be done to reduce pollution include using less pesticides and herbicides, treating sewage before it is released into the environment, reducing nutrient runoff from farms and lawns, and reducing noise pollution from ships and other sources.

Here are some specific examples of how pollution has affected fish populations:

- \* The use of the pesticide DDT in the 1960s caused a significant decline in fish populations.
- \* The Exxon Valdez oil spill in 1989 killed an estimated 100,000 seabirds and 30,000 sea otters, and it also had a significant impact on fish populations.
- \* Nutrient pollution has caused a number of dead zones in coastal waters around the world.

By taking steps to reduce pollution, we can help to protect our fish populations and ensure that they are healthy and sustainable for future generations.

## Answer to b.

I can imagine myself diving into the clear blue waters around the Maltese Islands and marvelling at the kaleidoscope of colours and light playing on the seabed. The small fish moving in between the seaweed would be a sight to behold.

However, if pollution were to affect these waters, it would be a tragedy. The pollution would cloud the water, making it difficult to see the colourful seabed. The fish would be stressed and could even die from exposure to pollutants. The seaweed would die and the entire ecosystem would be disrupted.

Here are some of the specific effects of pollution on the clear blue waters around the Maltese Islands:

- **Plastic pollution:** Plastic pollution is one of the most serious threats to marine ecosystems. Plastic can entangle and kill marine animals, and it can also break down into small pieces that are ingested by fish and other animals. These tiny plastic pieces can then accumulate in the food chain and eventually make their way into our own bodies.

- **Sewage pollution:** Sewage pollution can contain harmful bacteria, viruses, and chemicals that can pollute the water and make it unsafe for swimming, fishing, and other activities. Sewage pollution can also harm marine life by killing fish and other animals, and by disrupting their habitats.

- Oil spills: Oil spills can have a devastating impact on marine ecosystems. Oil can coat animals and plants, making it difficult for them to breathe and move. Oil can also kill marine life by poisoning them.

- Agricultural runoff: Agricultural runoff can contain fertilizers, pesticides, and other chemicals that can pollute the water and harm marine life. These chemicals can also make the water unsafe for drinking and swimming.

The good news is that there are things we can do to reduce pollution and protect the clear blue waters around the Maltese Islands.

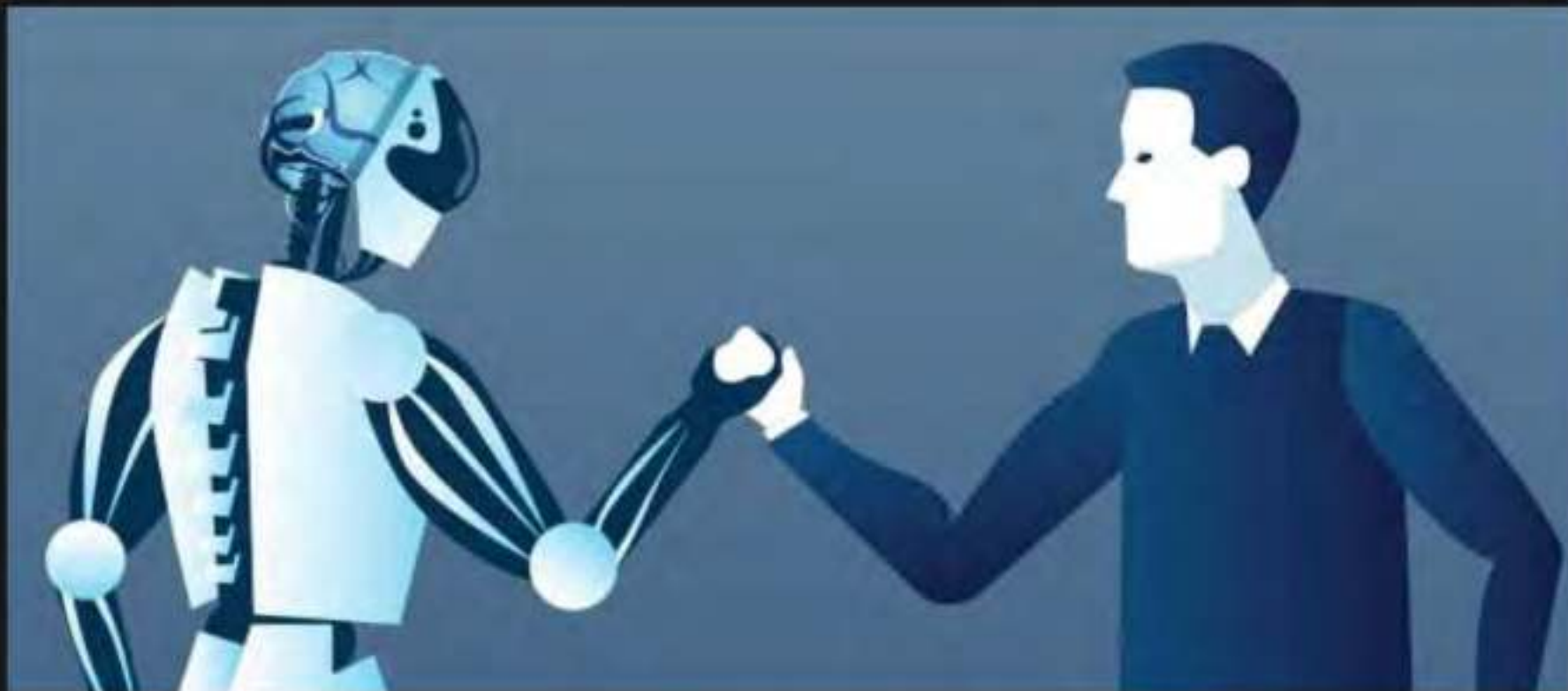
We can:

- Reduce our use of single-use plastics.
- Properly dispose of sewage and other waste.
- Support businesses that are committed to reducing their environmental impact.
- Get involved in local efforts to clean up our beaches and waterways.

By taking these steps, we can help to ensure that the clear blue waters around the Maltese Islands remain a beautiful and healthy place for generations to come.

share

Dr Patrick Camilleri



# CONCLUSION

Using AI with Human Intelligence  
for Student Success

**Enhancing what makes us Human**

# Challenges and Limitations of AI in Education

## Privacy & Ethical Concerns 🗝️

AI raises concerns about data privacy, security, and the ethical use of student information.

## Lack of Human Interaction & Emotional Intelligence 🧑

AI lacks the ability to provide the same level of human interaction and emotional support as teachers.

## Integration with Traditional Teaching Methods 🔄

Adopting AI requires integrating it with existing teaching methods and ensuring compatibility with curriculum goals.

# Benefits of AI in Education

## Personalised Learning 🎯

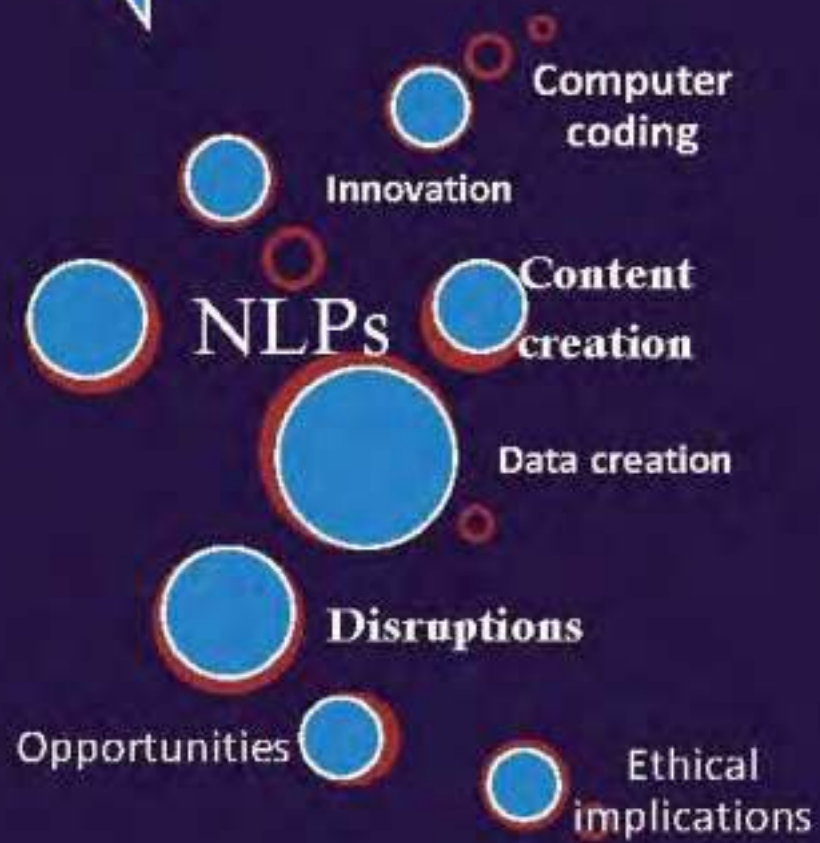
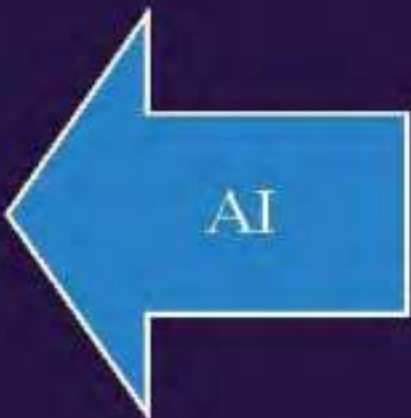
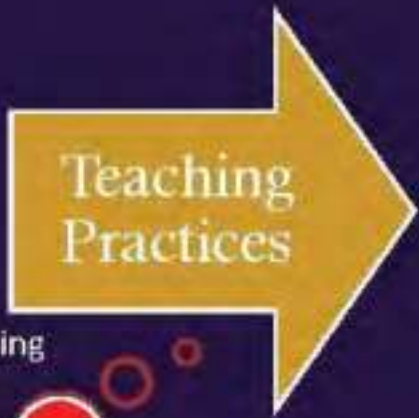
AI enables adaptive feedback and tailored content, catering to the individual needs and learning pace of students.

## Enhanced Teaching & Learning 📚

Teachers can leverage AI to deliver interactive lessons, intelligent tutoring, and simulations, making the learning experience more engaging and effective.

## Efficient Administrative Tasks 📅

AI automates administrative tasks such as grading, scheduling, and record-keeping, freeing up time for teachers to focus on instruction.





# CONCLUSION

## *The Future of AI in Education*

The future of education lies in harnessing the power of AI while ensuring a balance between technology and human interaction. AI has the potential to revolutionise education making it more personalised efficient and effective.



# Artificial Intelligence Education