

AI- what the heck is it?

Let me blow your mind

Avataar Video

- https://www.heygen.com/?sid=rewardful&via=start219&gad_source=1&gclid=EAlalQobChMIrbawpqrFiQMVzQWtBh1_rwLhEAAYASAAEgI8oPD_BwE

What I want you to take away today

1. No preconceived notions
 2. Think of possibilities
 3. Predict where the 'puck' is going to be...and be there before it reaches
-

Fun Facts

- There are **5.44 billion internet users** in the world as of 2024.
- Over 100,000 searches on Google every second
- There are **7.33 billion mobile phone users** in the world.
- It's predicted that there will be **75 billion connected devices** (smartwatches, etc.) around the world by 2025.

AND

- Most used password: 123456
 - Facebook: a leading factor in divorce
-

1 The accelerating pace of change ...



2 ... and exponential growth in computing power ...

Computer technology, shown here climbing dramatically by powers of 10, is now progressing more each hour than it did in its entire first 90 years

COMPUTER RANKINGS

By calculations per second per \$1,000



Analytical engine

Never fully built, Charles Babbage's invention was designed to solve computational and logical problems



Colossus

The electronic computer, with 1,500 vacuum tubes, helped the British crack German codes during WW II



UNIVAC I

The first commercially marketed computer, used to tabulate the U.S. Census, occupied 943 cu. ft.



Apple II

At a price of \$1,298, the compact machine was one of the first massively popular personal computers

3 ... will lead to the Singularity

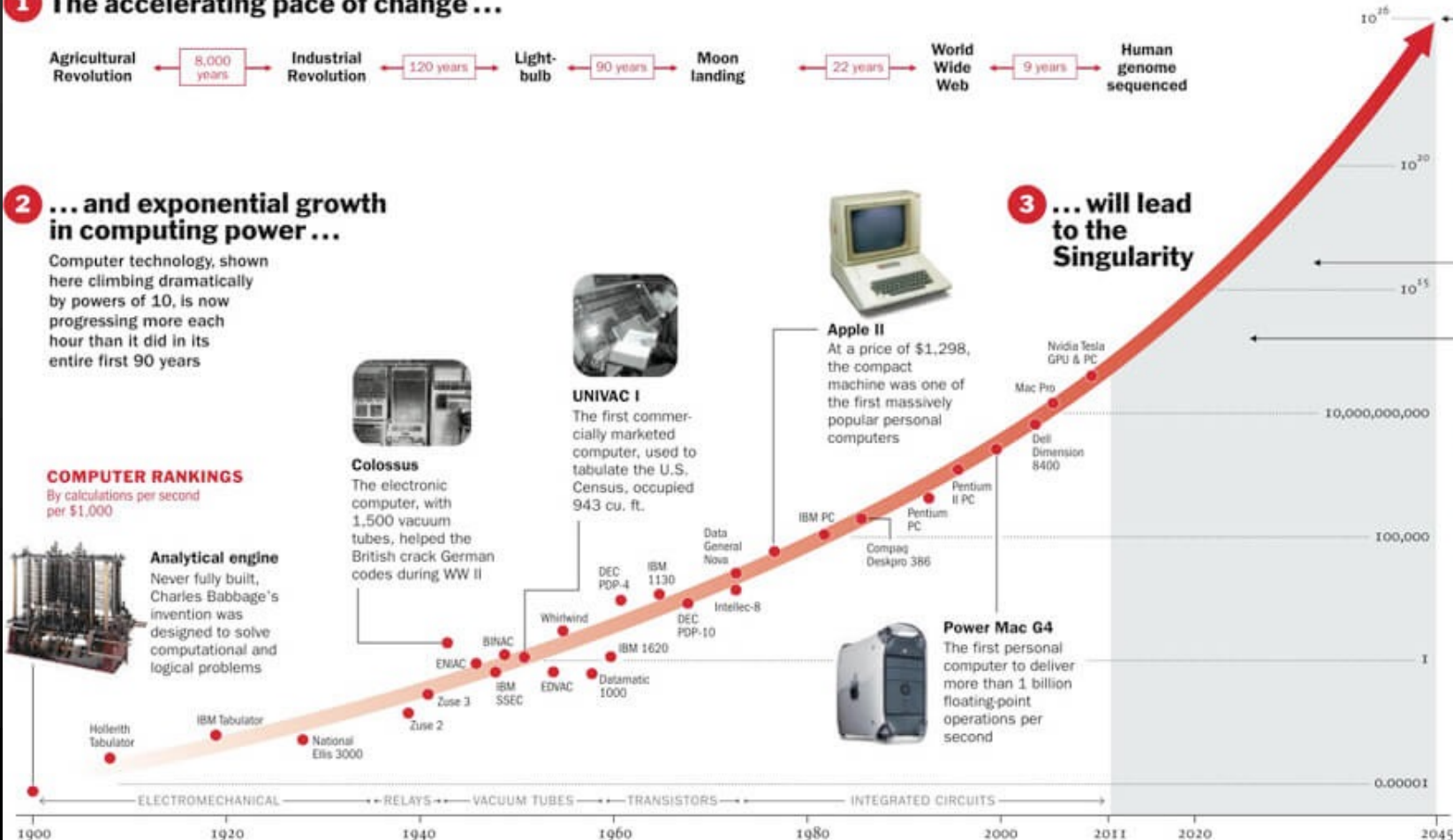
2045

Surpasses brainpower equivalent to that of all human brains combined

Surpasses brainpower of human in 2023

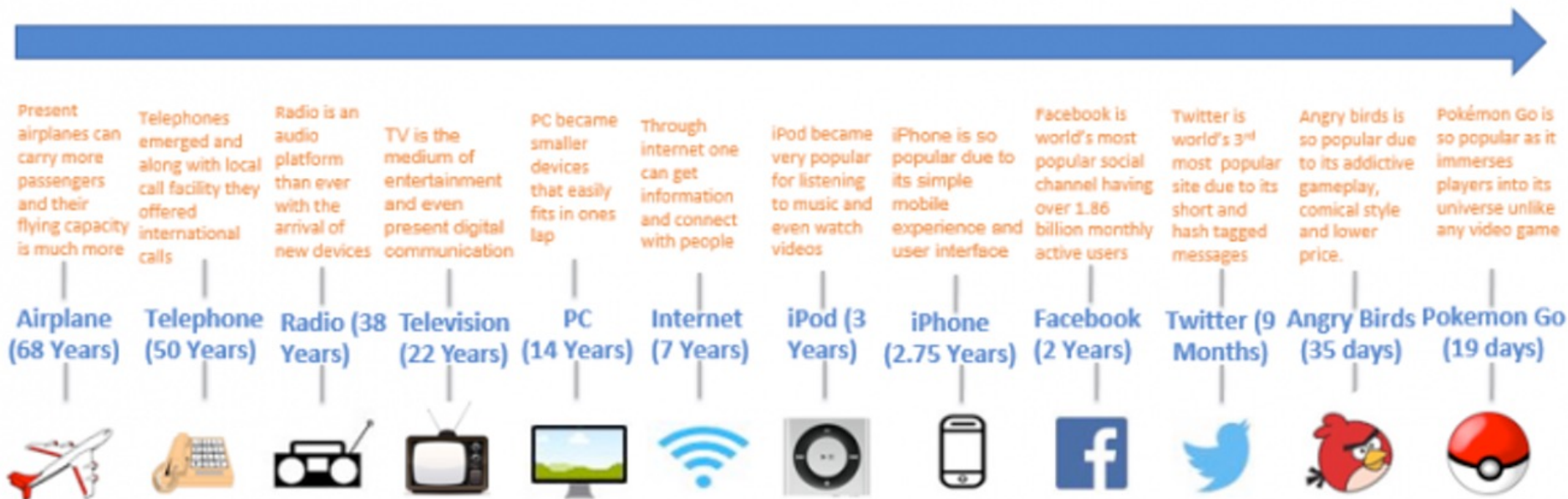


Surpasses brainpower of mouse in 2015



TECHNOLOGY: TIME TO REACH MASS ADOPTION

Defined as a 25% of market access



Fun Facts: Time to reach 100 million users

- Instagram: 2.5 years
 - Tik-Tok: 9 months
 - ChatGpt: 1 month
-

Data coming from many sources



**90% of ALL the world's data was
collected in the last...**

2 years.

**In 2012 we crossed 1 Zetta byte of
data for the first time**

Zyta what??

- Zytabyte=1 trillion GB, or 1,000,000,000,000,000,000,000 or 1 sextillion bytes of data
- = 33 million human brains
- = it would take over 117 million years for someone to watch every single movie ever made at 2 hours per movie without taking any breaks whatsoever
- Amount of digital data in the world exceeded 1 zytabyte in 2012

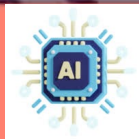
**By 2025 we will have
180 Zeta byte of data**

The perfect storm in 2012

1. Efficient Design (Algorithm)



2. HP (Computing power)



3. Fuel (Data)

What is AI

- AI, or Artificial intelligence is the simulation of human intelligence processes by machines, especially computer systems.
 - AI programming focuses on three cognitive skills:
 - Learning
 - Reasoning
 - self-correction
 - AI is a software program that writes itself
-

Reactive AI

- Good for simple classification and pattern recognition tasks
- Great for scenarios where all parameters are known; can beat humans because it can make calculations much faster
- Incapable of dealing with scenarios including imperfect information or requiring historical understanding



Limited memory

- Can handle complex classification tasks
- Able to use historical data to make predictions
- Capable of complex tasks such as self-driving cars, but still vulnerable to outliers or adversarial examples
- This is the current state of AI, and some say we have hit a wall



Theory of mind

- Able to understand human motives and reasoning. Can deliver personal experience to everyone based on their motives and needs.
- Able to learn with fewer examples because it understands motive and intent
- Considered the next milestone for AI's evolution



Self-aware

- Human-level intelligence that can bypass our intelligence, too



“Singularity”

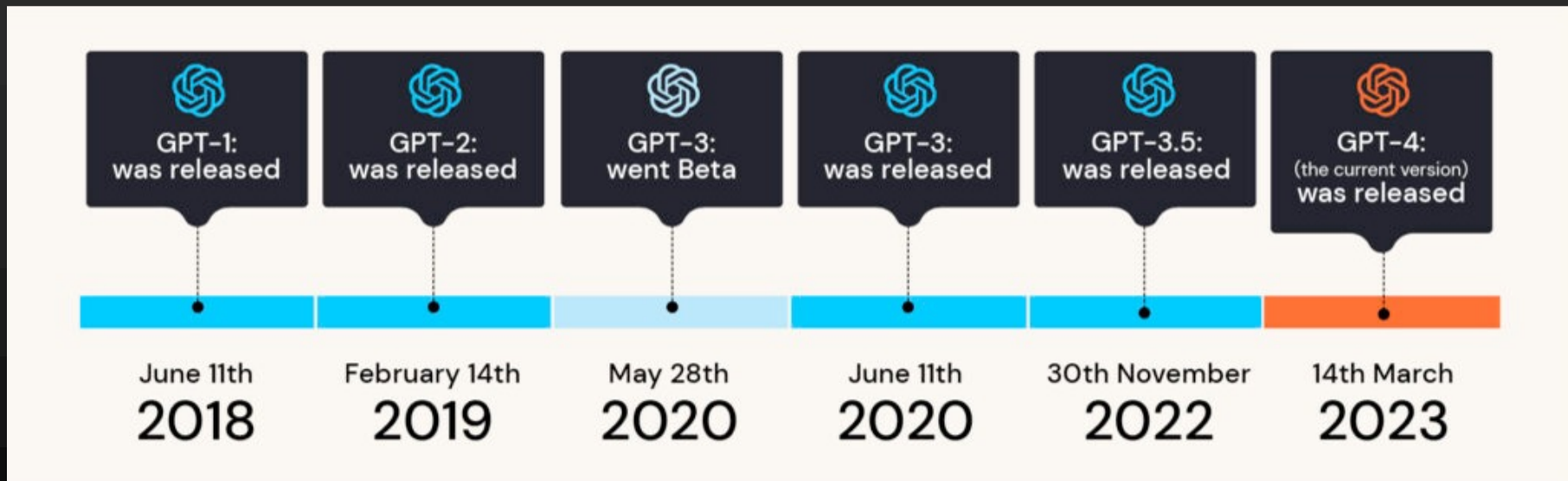


Generative AI

- Traditional AI systems are designed to recognize patterns and make predictions
- A category of artificial intelligence (AI) algorithms that generates new outputs/content based on the data they have been trained on.

ChatGPT is a form of generative AI chatbot

ChatGPT Timeline



117 million

1.5 Billion

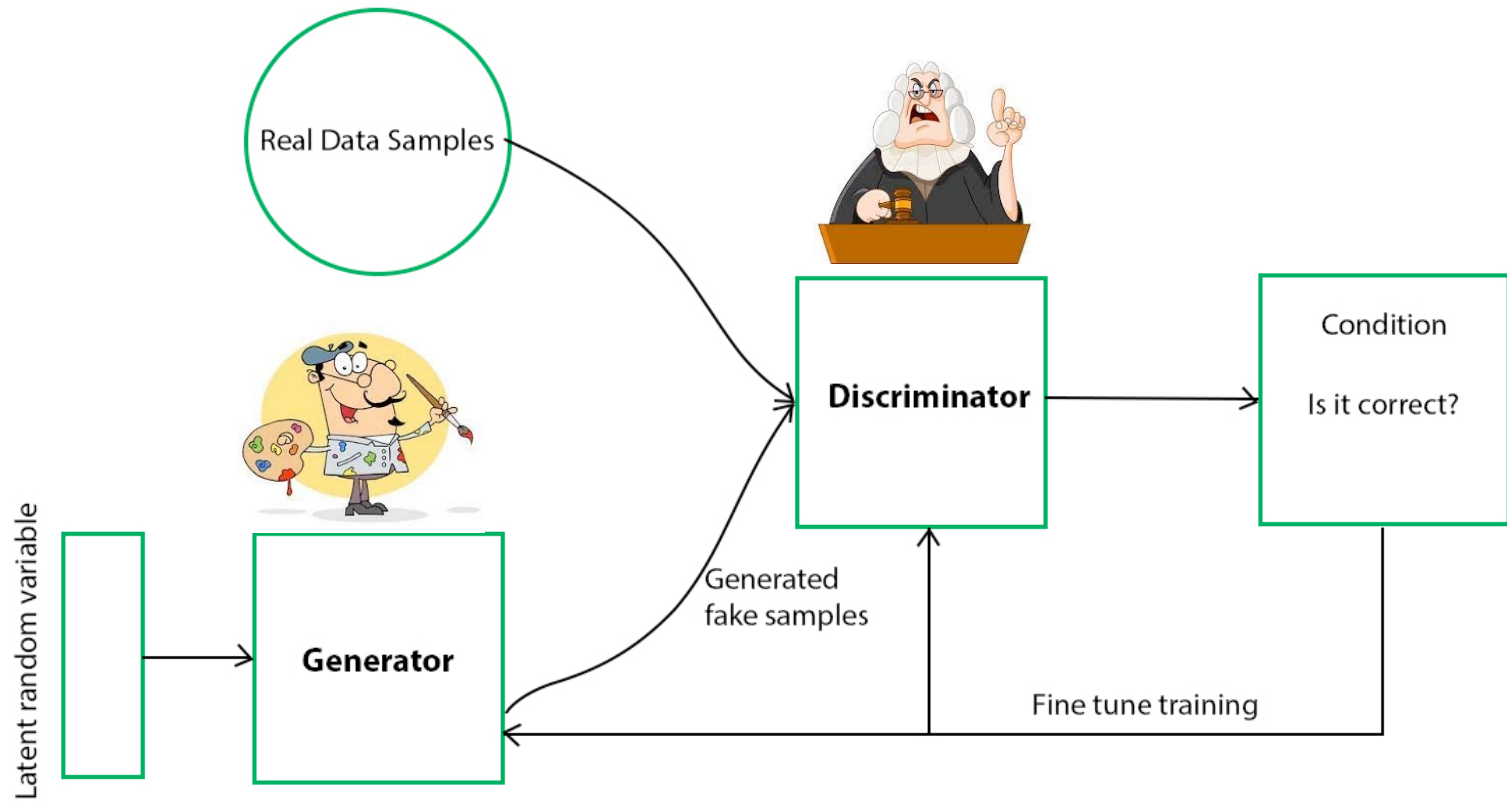
175 Billion

600 Billion

Let us get technical!

GAN

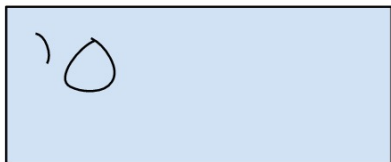
Generative Adversarial Network



Generated Data

Discriminator

Real Data

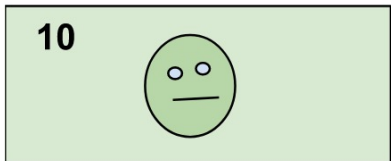


FAKE

REAL



As training progresses, the generator gets closer to producing output that can fool the discriminator:



FAKE

REAL



Finally, if generator training goes well, the discriminator gets worse at telling the difference between real and fake. It starts to classify fake data as real, and its accuracy decreases.



REAL

REAL



Images of people who do not exist



**Let us explore...what is
possible**



Spreadsheet creator

Generate

Structured Data

Open in Playground

Create spreadsheets of various kinds of data.

Prompt

USER

Create a two-column CSV of top science fiction movies along with the year of release.

Sample response

```
Movie,Year
2001: A Space Odyssey,1968
Blade Runner,1982
The Matrix,1999
Star Wars: Episode IV - A New Hope,1977
E.T. the Extra-Terrestrial,1982
The Terminator,1984
Inception,2010
Interstellar,2014
The Fifth Element,1997
Back to the Future,1985
```

Anyone can code...

Hi

write an html code to say hello world

Hi

write an html code to say hello world



Certainly! Here's a simple HTML code to display "Hello, World!" on a webpage:



html

Copy code

```
<!DOCTYPE html>
<html>
<head>
  <title>Hello, World!</title>
</head>
<body>
  <h1>Hello, World!</h1>
</body>
</html>
```

When you open this HTML file in a web browser, it will display the heading "Hello, World!" on the webpage.



Python bug fixer

Transform Code

Open in Playground

Find and fix bugs in source code.

Prompt

SYSTEM You will be provided with a piece of Python code, and your task is to find and fix bugs in it.

USER

```
import Random
a = random.randint(1,12)
b = random.randint(1,12)
for i in range(10):
    question = "What is "+a+" x "+b+"? "
    answer = input(question)
    if answer = a*b
        print (Well done!)
    else:
        print("No.")
```

Sample response

There are several bugs in the provided code:

1. The import statement is incorrect. Python is case-sensitive, so "Random" should be "random".
2. Variables 'a' and 'b' are defined outside the loop, so they will not change for each iteration. They should be inside the loop if you want to generate different questions.
3. In the question string, 'a' and 'b' are integers, so you need to convert them to strings using the 'str()' function to concatenate them.
4. In the if statement, you are using a single equals sign '=' which is an assignment operator. You should use the double equals sign '==' for comparison.
5. The print statement "Well done!" is not enclosed in quotes. In Python, strings must be enclosed in quotes.
6. The input from the user is a string, so you need to convert it to an integer using the 'int()' function before comparing it with



Improve code efficiency

Transform Code

Open in Playground

Provide ideas for efficiency improvements to Python code.

Prompt

SYSTEM You will be provided with a piece of Python code, and your task is to provide ideas for efficiency improvements.

USER from typing import List

```
def has_sum_k(nums: List[int], k: int) -> bool:
    """
    Returns True if there are two distinct elements in nums such that their sum
    is equal to k, and otherwise returns False.
    """
    n = len(nums)
    for i in range(n):
        for j in range(i+1, n):
            if nums[i] + nums[j] == k:
                return True
    return False
```

Sample response

The current implementation has a time complexity of $O(n^2)$ due to the nested for loops. This can be improved to $O(n)$ by using a set to store the numbers we have seen so far.

Here is the improved code:

```
"""python
```



Transform Your Green Thumb into a Green Empire with Bloomify

The ultimate app for plant care and maintenance

[Download](#)

AI web design - web

Welcome to Bloomify!

We are here to help you take your love for plants to the next level. With our comprehensive plant care app, you will have all the tools you need to keep your plants healthy, happy, and thriving. From watering reminders and



Examples

- Sales forecasting
 - Digital and social marketing
 - Sales pitches using avatars
 - Automated procurement
 - Contract risk assessment
 - Contract writing
 - Customer care management
-

Digital Marketing

1. Content Generation
 2. Social Listing
 3. Predictive analytics and targeted marketing
 4. Influencer marketing
 5. Real time trend monitoring
 6. Ad budgeting, bidding, and testing
 7. Customer service
 8. Image and Video recognition
 9. Post scheduling
 10. Performance analysis and fine tuning
-

AI in Social Media and Social listning

- <https://www.sprinklr.com/blog/ai-in-social-media/>
-

Let us write a poem

**We have a poem/song
How about adding a singer...a
virtual human influencer who
can sing in any voice?**

-
- <https://www.instagram.com/lilmiquela/?hl=en>
 - <https://www.youtube.com/watch?v=6bn3tUUtj2M>
-

**Thoughts to text, books, plays,
scripts, and more...**

No more writer's block!

AI co-writer

Co-writing...anything between man and machine

that I'm not exactly thrilled about
this .

ASHER

You're gonna be fine. We're all just
going to get along for this, right?

SAM

Yeah, but I think it's a good idea for
me to stay on the phone with Jules.

ASHER

That's ok. Do that.

SAM

Cool, cool.

ASHER

Whatever.



SCRIPT PARAMETERS

Genre movie

Comedy

Based on

Superbad



CHARACTER PARAMETERS

Name 1

Sam

Gender 1

Male

Name 2

Jules

Gender 2

Female

→ GENERATE SCRIPT

**Text to voice...maybe an
audiobook, or an ad**

VEED



Text to images...

An expressive oil painting
of a basketball player
dunking, depicted as an
explosion of a nebula



A bowl of soup that is also
a portal to another
dimension, digital art



Let us take it up a notch...



GEN-2

Now available

Let us dial it a little bit more...



**Bigger impact on societal
norms than even the
internet...**



Sakura, 18

Intelligent and shy art school student channels her creativity through her love for manga and gaming



Sienna, 28

Business teacher and entrepreneur. She likes to enrich her intellect with podcasts and books

CNN



**How about bringing the dead
to life...**

LIVING FOREVER?

AI

GEOVANY DIAS

ⓧ @GEOVANYDIAS01

PIX11.COM

PIX 11

PIX 11



Interact with your StoryFile

Desktop ▾

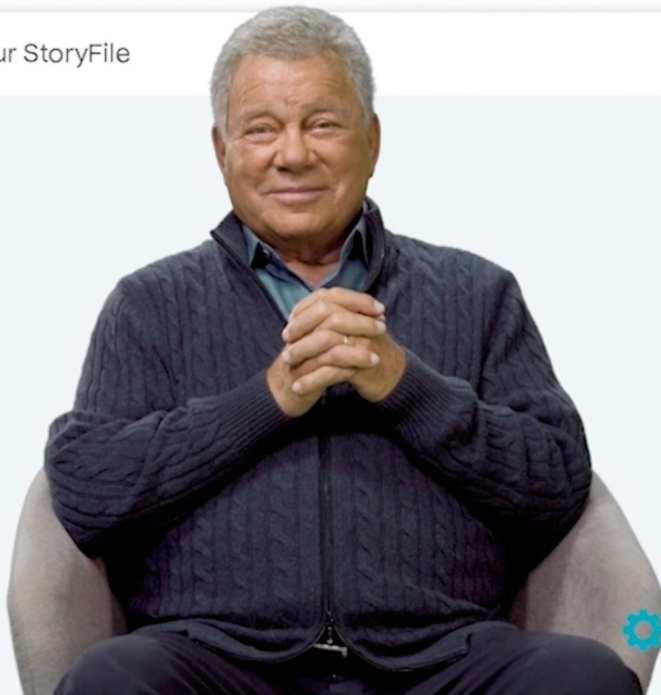
MAKING AUTHENTIC AI

Have The Conversation Of A Lifetime

We pioneered Conversational Video AI –
We call this interactive medium a storyfile.

[LET'S TALK!](#)

Ideas



Hold to Talk

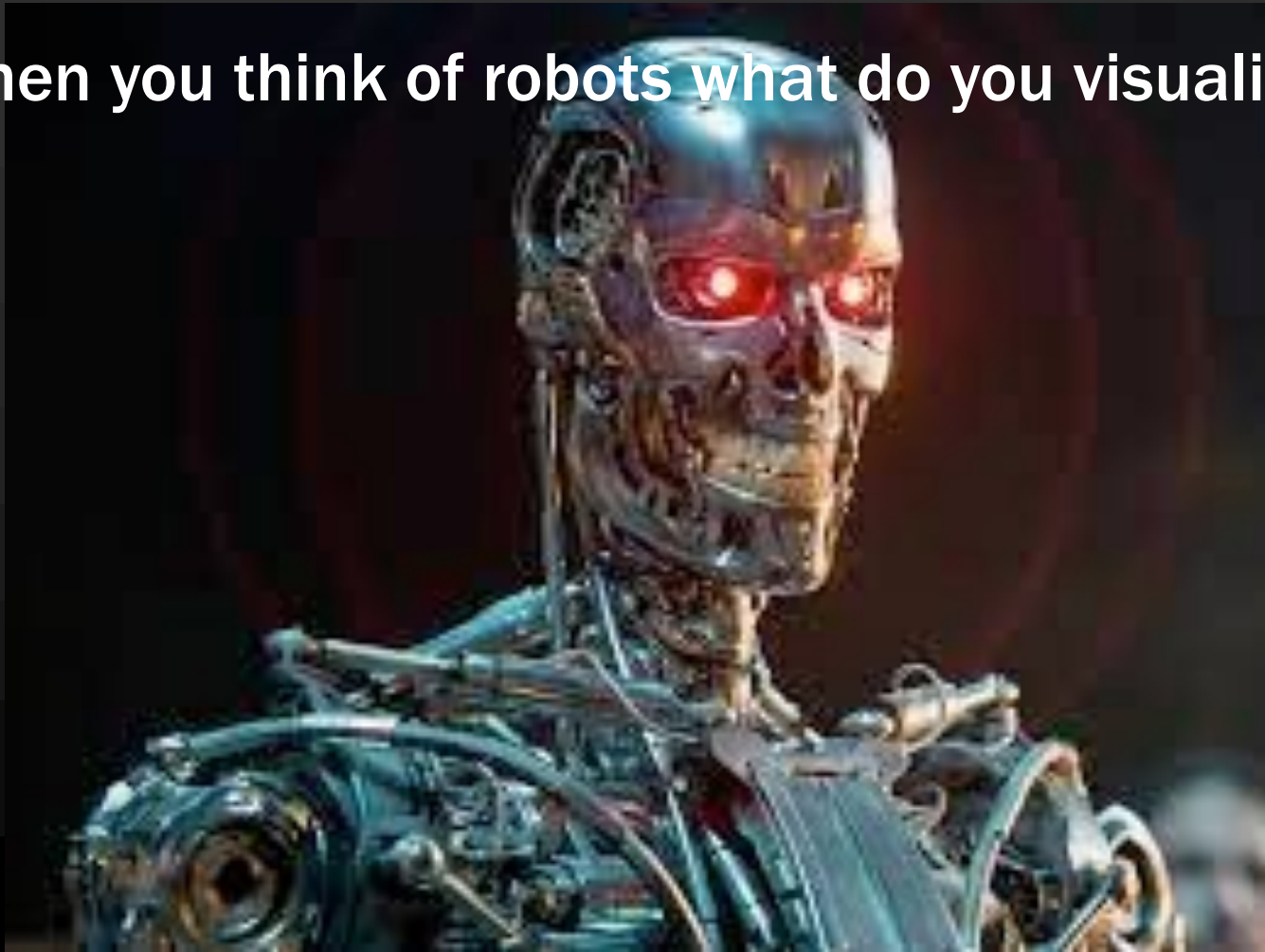


Robotics 101

**Next version of robots are
coming**

Are you ready?

When you think of robots what do you visualize?



Have you heard of Boston Dynamics?

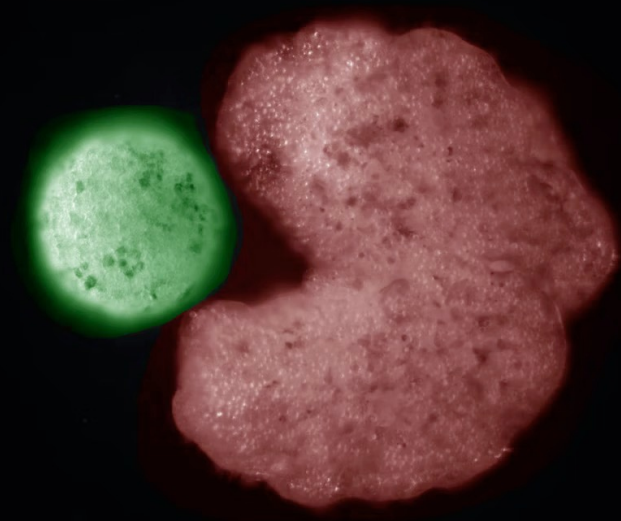
- https://www.youtube.com/watch?v=-e1_QhJ1EhQ

Let us take it up a
notch

-
- <https://www.youtube.com/watch?v=wL64jqYn4CE>
 - <https://www.youtube.com/watch?v=aBYtBXaxsOw>
-

Not hot enough?

Let us take it up a notch,
again



Sizzling!
One more please!

How about robots that are...

...Self Aware?

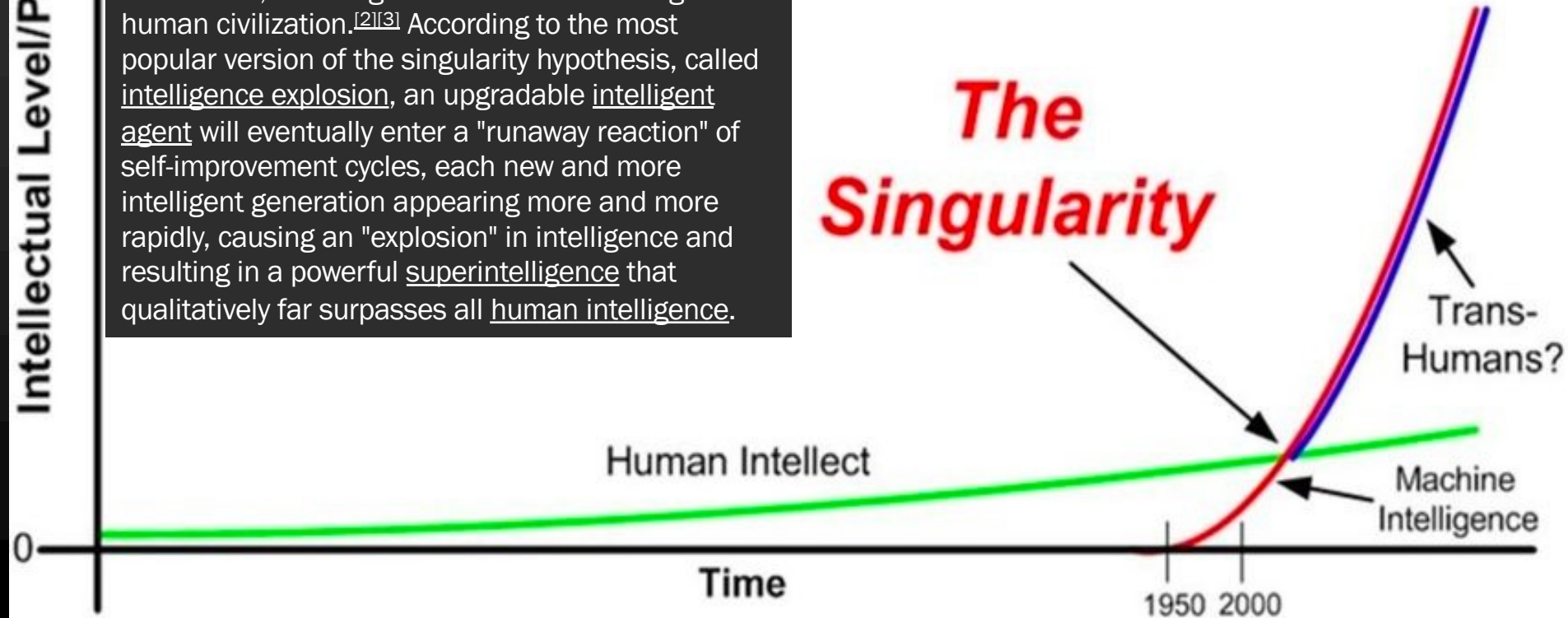
Let us pause for a
few seconds....



Shock and Awe 101

The **technological singularity**—or simply the **singularity**^[1]—is a hypothetical point in time at which technological growth becomes uncontrollable and irreversible, resulting in unforeseeable changes to human civilization.^{[2][3]} According to the most popular version of the singularity hypothesis, called intelligence explosion, an upgradable intelligent agent will eventually enter a "runaway reaction" of self-improvement cycles, each new and more intelligent generation appearing more and more rapidly, causing an "explosion" in intelligence and resulting in a powerful superintelligence that qualitatively far surpasses all human intelligence.

The Singularity





The Dark Side 101

The other side of the coin

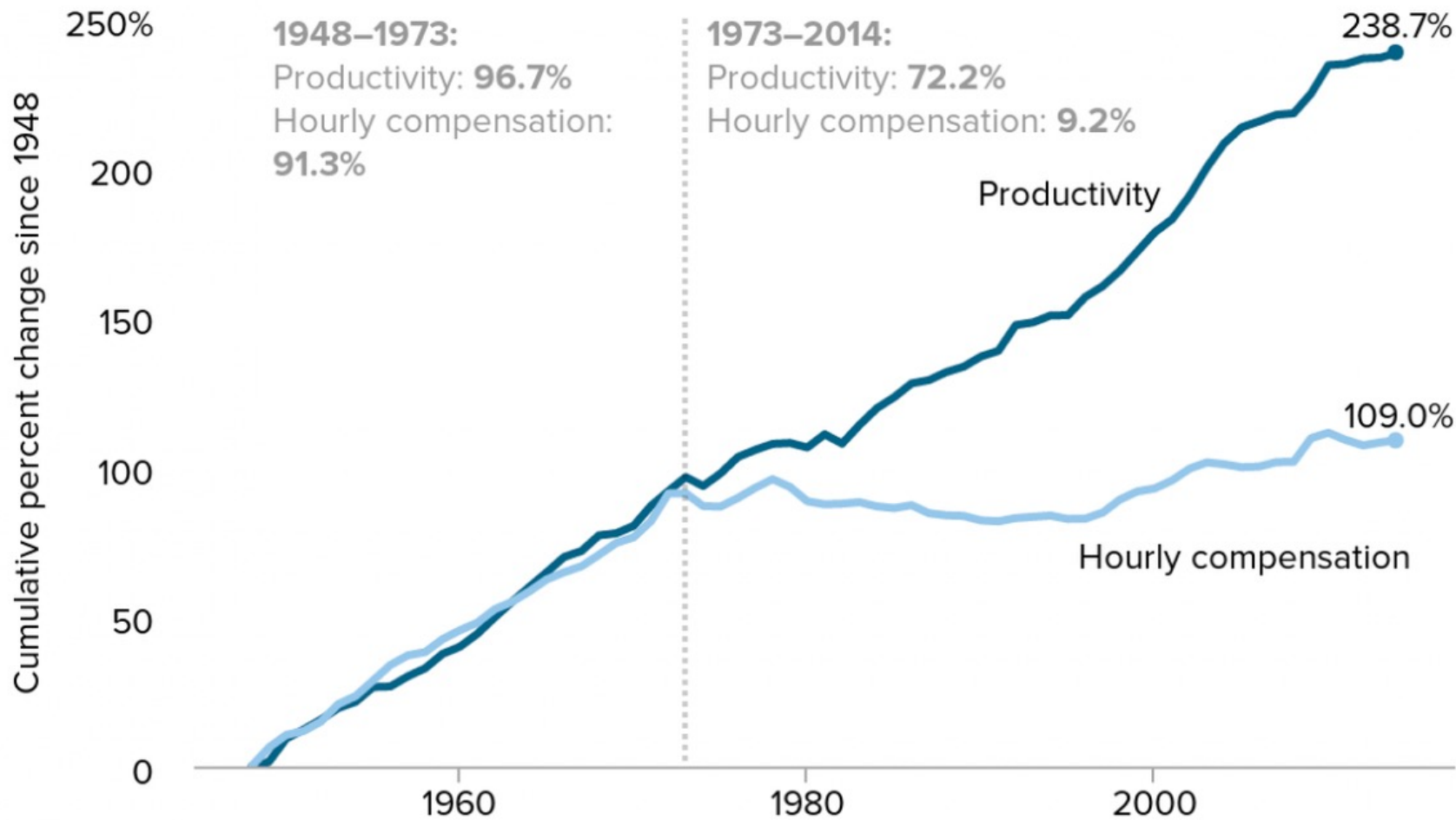
1. Drone Swarms <https://www.youtube.com/watch?v=u2bQSKvZ2qI>
2. Spying Smart Home Devices
3. Facial Recognition
4. AI Cloning and Deepfakes (video) <https://www.youtube.com/watch?v=oxXpB9pSETo>
5. Ransomware, AI and Bot-enabled Blackmailing and Hacking
6. Smart Dust
7. Fake News Bots [Link](#)
8. Editable genes, CRISPR, and gene drives , [designer babies for the rich](#)
9. Surveillance capitalism
10. Artificially intelligent self aware bio-bots
11. Wealth in the hands of a few

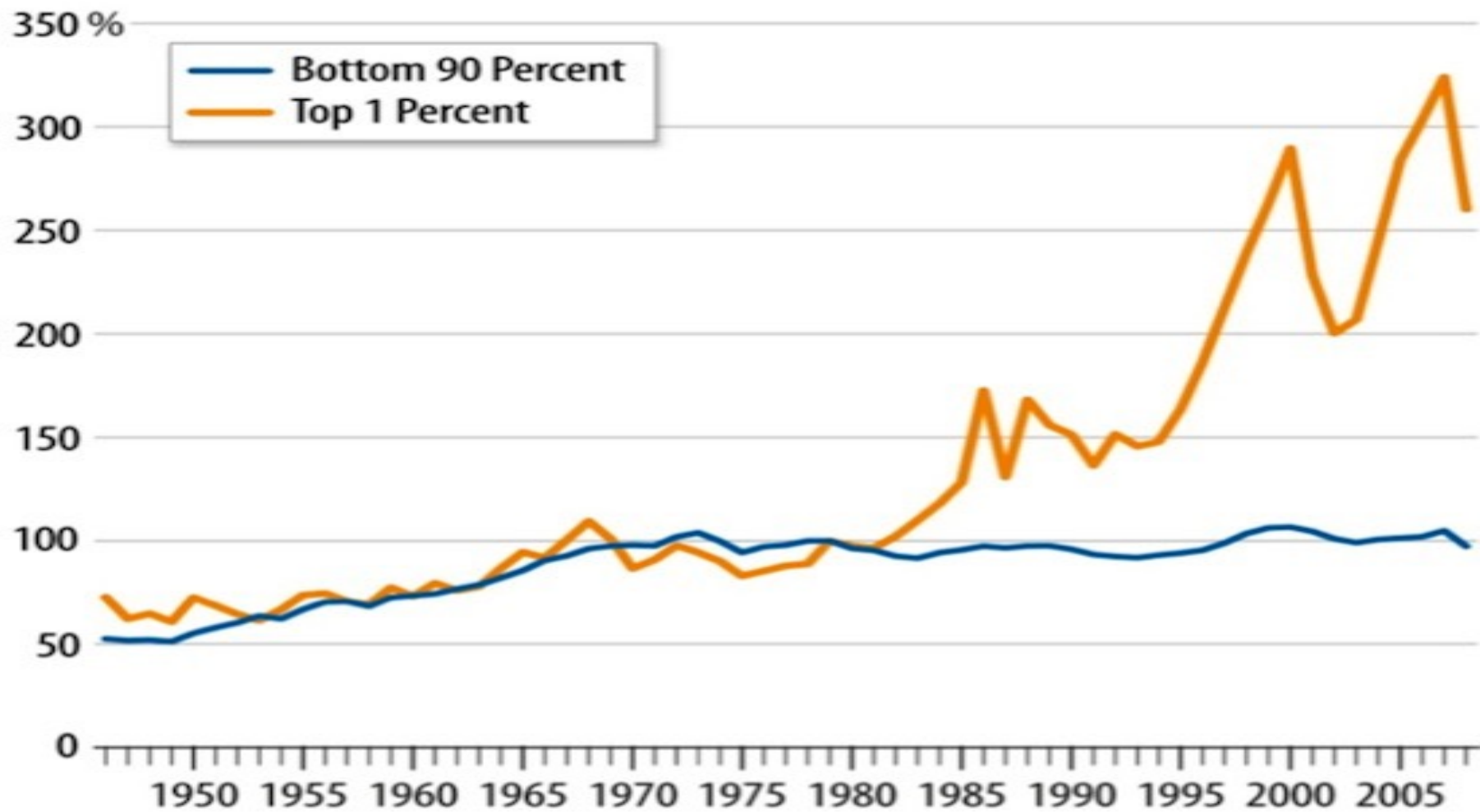
What about Job Loss?

- Today, 60% of the jobs have at least 30% of element that is completely automatable
- As technologies evolves it will take 20 years for all current jobs to be automated
- One-third of new jobs created in the United States in the past 25 years were types that did not exist, or barely existed, in areas including IT development, hardware manufacturing, app creation, and IT systems management



Introspection 101





Source: CBPP calculations based on data from Piketty and Saez.

HUGE Advantages

- Paradigm shift – unconstrained by human processing power what all can be achieved
 - Efficiency, accuracy, productivity
 - Cure for diseases never thought possible
 - Revolutionary ideas on climate change
 - Growing body parts

HUGE Risks

- Productivity is increasing but quality of life is not
- Job loss (lot more white collar) and greater divide between haves and have nots
- Surveillance capitalism – watch the Netflix documentary “The Great Hack”
- Man playing God

Watch Netflix: ‘Social Dilemma’, and ‘The Great Hack’

**Rapid Change will be the
new normal**

Are you ready?

Suggested action items

- Open an account on openai and just play with it. You will not break it!
 - Have someone in your organization explore it
 - Identify a project and get university students intern for you. You learn and get business benefit too. Some example projects
 - Digital marketing and social listening
 - Purchasing and sales predictions, by sku, region, seasonality, etc.
 - Create an avatar and create sales presentations, employee training, etc.
-

Sites of interest

- By clicking. On paper clip icon you can upload a file. It can be excel csv, or any data file. Let us say you uploaded 2022 sales data
- Ask for it to “plot sales data” or “what product sold the most for 2022”, or “most sold quantity for 2022”, or “average of sale for 2022”. Or even forecast 2023 sales based on 2022 sales data.
- Don't worry about syntax. If it does not understand it will ask you. After you ask above you will be comfortable to explore more. Just play with it!

