



# AI & THE METAVERSE

MARCH 2023

[WWW.METAVRSE.COM](http://WWW.METAVRSE.COM)

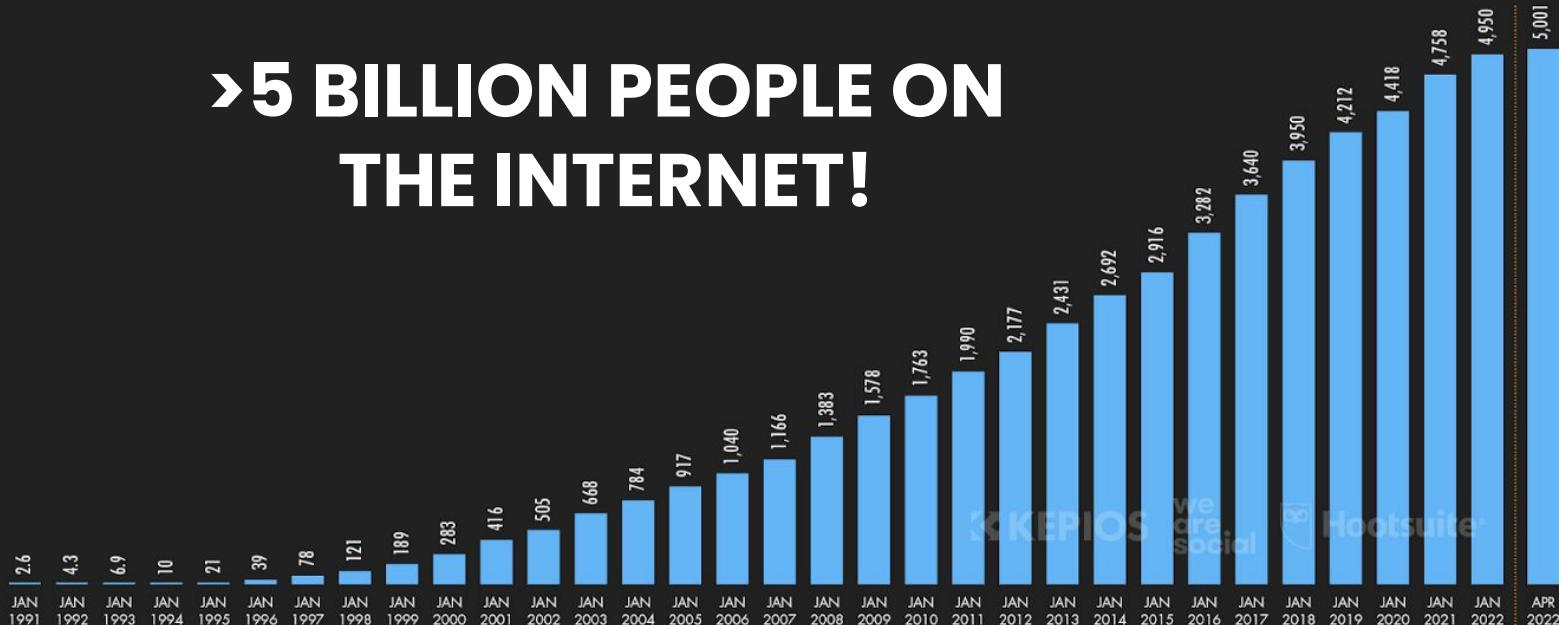
APR  
2022

# INTERNET USERS OVER TIME

NUMBER OF INTERNET USERS (IN MILLIONS)



>5 BILLION PEOPLE ON  
THE INTERNET!



**SOURCES:** KEPIOS ANALYSIS; ITU; GSMA INTELLIGENCE; EUROSTAT; GWI; CIA WORLD FACTBOOK; CNNIC; APJI; LOCAL GOVERNMENT AUTHORITIES. **NOTE:** INTERNET USER NUMBERS FOR YEARS PRIOR TO 2011 ARE BASED ON THE ITU'S PUBLISHED FIGURES FOR THE PREVIOUS YEAR, BECAUSE THESE FIGURES WOULD HAVE BEEN THE LATEST AVAILABLE IN JANUARY OF EACH REPORTING YEAR. **ADVISORY:** DUE TO COVID-19-RELATED DELAYS IN RESEARCH AND REPORTING, FIGURES FOR PERIODS AFTER 2020 MAY UNDER-REPRESENT ACTUAL USER NUMBERS AND ASSOCIATED GROWTH TRENDS. SEE NOTES ON DATA FOR MORE DETAILS. **COMPARABILITY:** SOURCE AND BASE CHANGES. FIGURES MAY NOT MATCH OR CORRELATE WITH DATA PUBLISHED IN PREVIOUS REPORTS.



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***"The Metaverse is a Fast Growing Multi-Trillion Dollar Opportunity"***



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A NEW ERA

# The Age of AI has begun

Artificial intelligence is as revolutionary as mobile phones and the Internet.

By **Bill Gates** | March 21, 2023 • 14 minute read



Artificial Intelligence (AI) refers to a model created to solve a specific problem or provide a particular service.

Artificial General Intelligence (AGI) refers to software that's capable of learning any task or subject



## 5 KEY LEARNINGS

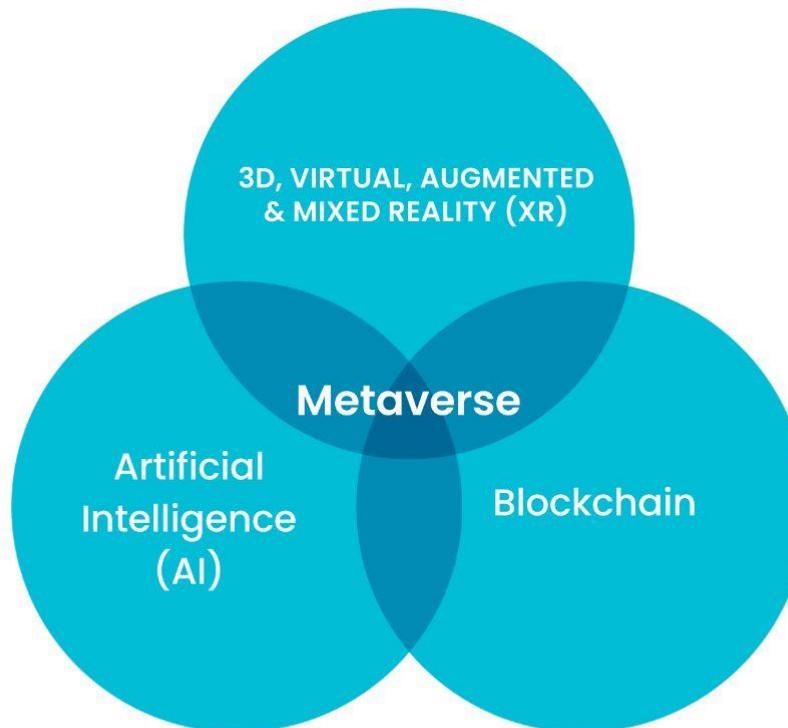
1. How AI and the Metaverse Intersect?
2. How AI is being used today?
3. What are the best AI tools to build the Metaverse?
4. Who are the best Metaverse AI artists?
5. What's next for AI & The Metaverse?



# How AI and the Metaverse Intersect?



METAVERSE = INTERNET + BLOCKCHAIN + XR + AI



#### ARTIFICIAL INTELLIGENCE :

- GPT-4 and Conversational Interfaces
- Natural Language Processing (NLP)
- Computer Learning
- Machine Learning
- Simultaneus Location & Mapping (SLAM)
- Automated Content Creation
- Suggestion Algorithms
- Neural Radiance Fileds (NeRFs)
- Coding Assistants

#### 3D/XR:

- Volumetric Conferencing (Project Starline) and Lightfield Displays etc.
- Avatars
- Communication & Collaboration Tools
- VR/AR/MR (XR)
- Volumetric Capture
- Haptics
- Scent
- Spatial Audio
- Game Engines (Creation Platforms)

#### BLOCKCHAIN:

- Web3
- Blockchain
- Decentralized Ledger Technology (DLT)
- Non-Fungible Tokens (NFT)
- Tokens/Coins
- Distributed Autonomus Organizations (DAOs)
- Digital Land
- Decentralized Finance (DeFi)
- Smart Contracts
- Cryptocurrencies

# **AI & The Metaverse**

- 1. Intelligent avatars**
- 2. Personalization**
- 3. Content creation**
- 4. Virtual assistants**
- 5. Predictive analytics**



# AI Technologies Related to The Metaverse

- Generative Pre-Trained Transformer (GPT-4)
- Generative AI (Text-to-Everything)
- Automated Content Creation
- Natural Language Processing (NLP)
- Computer Vision (CV)
- Machine Learning (ML)
- Simultaneous Location & Mapping (SLAM)
- Suggestion Algorithms
- Neural Radiance Fields (NeRFs)
- Coding Assistants





AV

# How AI is being used today?









GDC2023



# STATE OF UNREAL

Livestream





AV

# 3D Asset Creation





# Generative AI on ROBLOX





What are the best AI tools  
to build the Metaverse?



# THERE'S AN AI FOR THAT

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# Metaverse Related AI Tools

- Search: BingGPT, Google AI, ChatGPT, OpenAI
- Text: Summarizing or automating content. GPT3/4, ChatGPT, OpenAI
- Images: Midjourney, DALL-E, Stable Diffusion, Hugging Face
- Audio: Play.ht, Clipchamp, Soundraw
- Video: Synthesia, VEED.io
- Code: ChatGPT, GitHub Co-Pilot, IntelliCode, PyCharm, Jedi
- Chatbots: Zendesk, Ada, DeepConverse
- Natural Language Processing (NLP): InWorldAI, Synthesia, MindMeld
- Computer Vision: HawkEye, VisoAI, DeepMind, SenseTime
- SLAM: Apple, PTC, Snap, Niantic, Meta
- Machine Learning (ML): NVIDIA, Microsoft, iTechArt, Meta
- Suggestion Algorithms: Google, Amazon, Microsoft, Netflix





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# FUTUREPEDIA

THE LARGEST AI TOOLS DIRECTORY, UPDATED DAILY

Tools Added Today

13

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5

Metaverse

X

Filters



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Discover useful new AI tools.



Blockade  
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Fantasy Landscape

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Alan Smithson

Jan 31 · 9 min read · [Listen](#)



# Practical Guide to AI in the Metaverse

**A deeper look at artificial intelligence and its importance to the future of the Metaverse.**

\*



'AI in the Metaverse' — Made with Midjourney



Alan Smithson

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Alan's purpose in life is to inspire and educate future leaders to think and act in a socially, economically and environmentally sustainable way.

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 Adam Nemeth in UX Collective



**AI and context: which jobs will it replace?**

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**How ChatGPT really works, explained for non-technical people**

 Simon Greenman



**Who Will Make Money from the Generative AI Gold Rush? Part I**

 FinSentim in FinSentim



**OpenAI Models vs. Open AI Models**



# Who are the best Metaverse AI artists?





**Android Jones – Microdose VR**



# The Girl Who Talks To AI

A close-up photograph of a woman with short, dark hair, looking slightly downwards and to her left with a neutral expression. She is positioned in the center of the frame, surrounded by several thick, vertical red bars that create a cage-like effect. The background is dark and indistinct.

# Midjourney --v 1 to --v 5 - PROMPT: Peace on Earth



V 1



V 3



V 5



V 2



V 2



V 4



V 4





AV

# 12 songs created by AI

Editorial Feature



By Barbican Centre





AV

Rafik Anadol



N G V





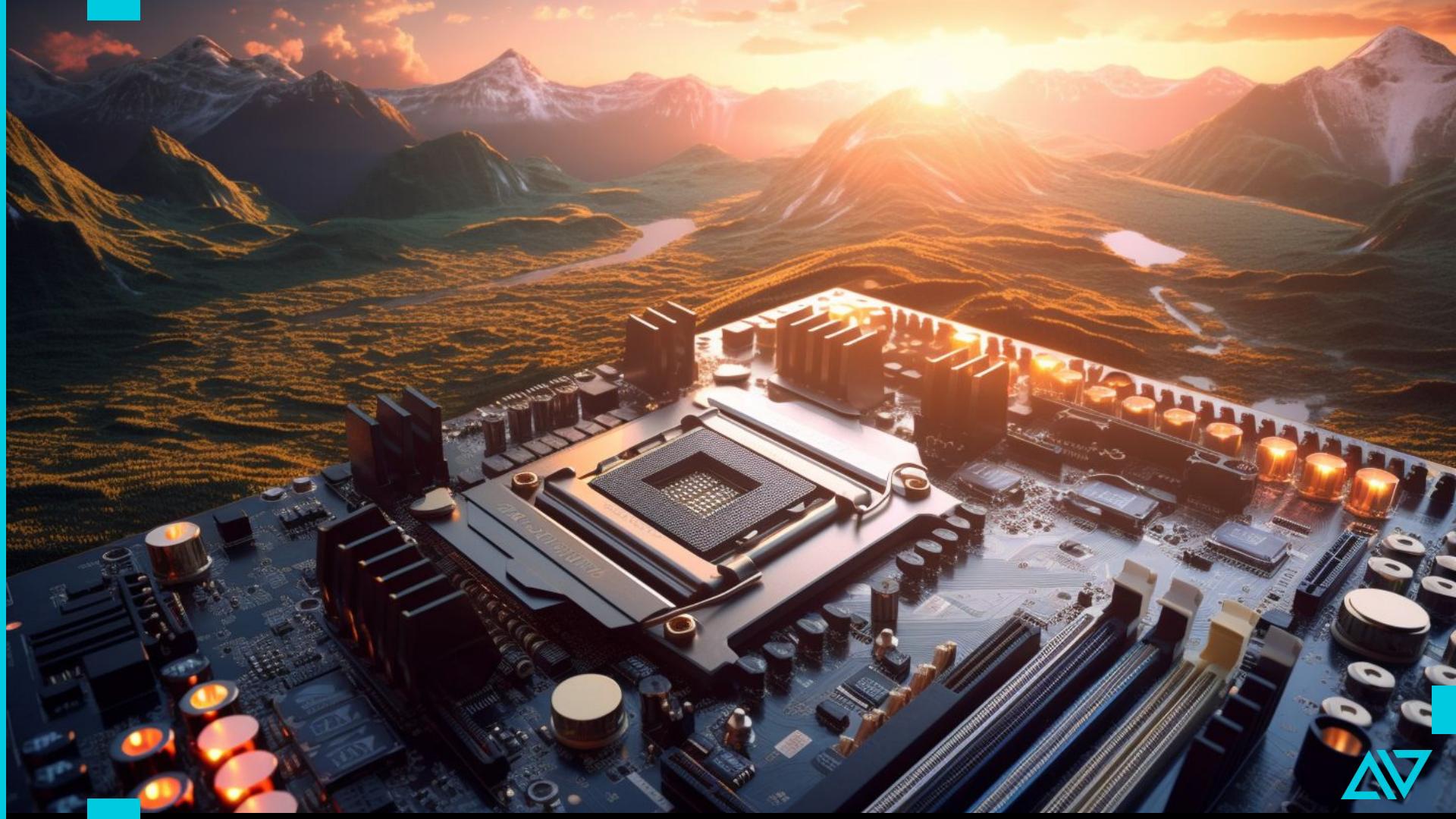
Mario Klingemann



Masterworks: Expert Voices

# Infinite Portraits of Non-Existent People





AV

YOU!



# What's next for AI & The Metaverse?



# Future AI Improvements

- Improved AI-driven avatars and NPCs
- AI-assisted content creation
- Personal AI assistants
- Enhanced privacy and security
- AI-driven analytics and optimization
- Immersive AI-powered education and training
- Integration of AI-driven services
- AI-enhanced social experiences
- Brain-Computer Interfaces



“Properly done it is going to eliminate a lot of current jobs. That is true,”

- Sam Altman, Founder, OpenAI





Popular

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*The Atlantic*

# How ChatGPT Will Destabilize White-Collar Work

No technology in modern memory has caused mass job loss among highly educated workers. Will generative AI be an exception?

By Annie Lowrey



# AI & Education





AP photo

**Elementary school teachers picket against use of calculators in grade school**  
The teachers feel if students use calculators too early, they won't learn math concepts

## Math teachers protest against calculator use

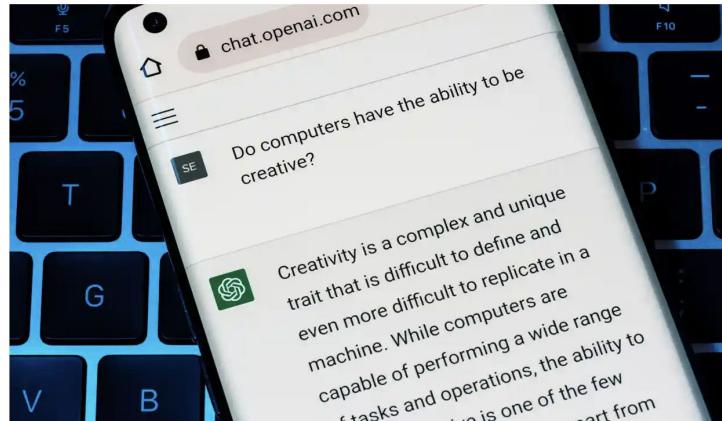
By JILL LAWRENCE

"My older kids don't pay any strate," he said. "Teachers are

1988

## New York City schools ban AI chatbot that writes essays and answers prompts

ChatGPT tool will be forbidden across all devices and networks in public schools over 'concerns about negative impacts on learning'



ChatGPT is an artificial intelligence chatbot that generates human-like writing. Photograph: Ascannio/Alamy

New York City schools have banned ChatGPT, the artificial intelligence chatbot that generates human-like writing including essays, amid fears that students could use it to cheat.

According to the city's education department, the tool will be forbidden across all devices and networks in New York's public schools. Jenna Lyle, a department spokesperson, said the decision stems from "concerns about negative impacts on student learning, and concerns regarding the safety and accuracy of contents".

2023



# AI Regulation



Administration      Priorities

OFFICE OF SCIENCE AND TECHNOLOGY POLICY

## BLUEPRINT FOR AN AI BILL OF RIGHTS

MAKING AUTOMATED SYSTEMS WORK FOR  
THE AMERICAN PEOPLE

***"Among the great challenges posed to democracy today is the use of technology, data, and automated systems in ways that threaten the rights of the American public..."***

***"Algorithms used in hiring and credit decisions have been found to reflect and reproduce existing unwanted inequities or embed new harmful bias and discrimination"***

United States White House Blueprint for AI Bill of Rights



# AI-generated images from text can't be copyrighted, US government rules

The US Copyright Office left open the door for protecting works with AI-generated elements.





Metaverse Creation for **Everyone**



[MetaVRse.com](http://MetaVRse.com)





Alan Smithson 🚀

Father, Founder, Futurist.  
Building for the positive ...



# Thank You!



## RESOURCES

- <https://www.futurepedia.io/>
- <https://medium.com/@alan-smithson/practical-guide-to-ai-in-the-metaverse-583020bbe61f>
- <https://www.gatesnotes.com/The-Age-of-AI-Has-Begun>
- <https://ised-isde.canada.ca/site/innovation-better-canada/en/artificial-intelligence-and-data-act-aida-companion-document>
- [https://www.youtube.com/watch?v=4P3DMMwvCfY&ab\\_channel=MetaAI](https://www.youtube.com/watch?v=4P3DMMwvCfY&ab_channel=MetaAI)
- [https://www.youtube.com/watch?v=1Djsasi1ch4&ab\\_channel=JeremyQuainoo](https://www.youtube.com/watch?v=1Djsasi1ch4&ab_channel=JeremyQuainoo)
- [https://www.youtube.com/watch?v=2GKftWGv0sE&ab\\_channel=CopenhagenInstituteforFuturesStudies](https://www.youtube.com/watch?v=2GKftWGv0sE&ab_channel=CopenhagenInstituteforFuturesStudies)
- <https://artsandculture.google.com/story/12-songs-created-by-ai/VwVhbAD7QslgLA>
- <https://www.linkedin.com/pulse/when-billion-people-use-generative-ai-2024-doug-hohulin/>
- <https://www.engadget.com/ai-generated-images-from-text-cant-be-copyrighted-us-government-rules-174243933.html>

