

Artificial Intelligence In Video Games

Andrej Samuel Marko

27.11.2022

Future

References

Evolution

Scripted AI

How does AI work

How does AI work

What is AI?

- Mimic of human intelligence
- Using self-improvement

What can we use AI on?

- Solving complex problems
- Making predictions
- Finding answers for hard questions

Why is AI better than human?

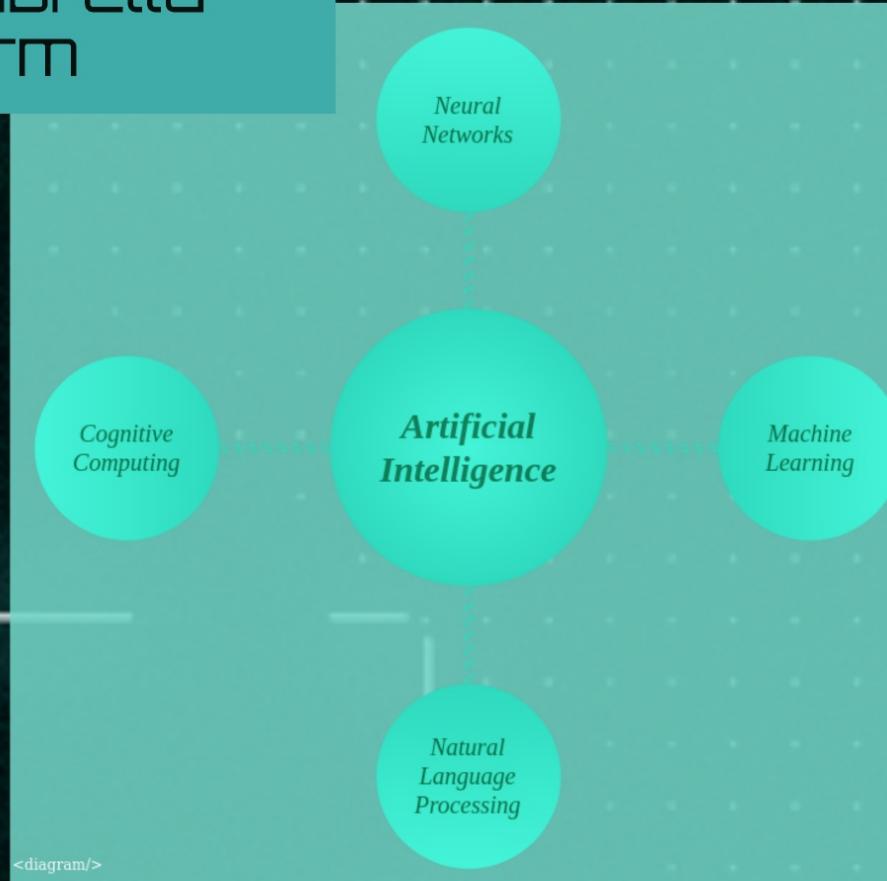
- Automatization of repetitive tasks
- Analyzing data is much faster
- It is almost 100% accurate

Umbrella Term

AI Revenue

AI Market

Umbrella Term



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Cumulative Global AI Revenue Forecast 2016–2025

Ranked by use case (In Millions of Dollars)

Machine/vehicular object detection/identification/avoidance	8,986.57
Static image recognition, classification and tagging	7,642.83
Patient data processing	7,259.35
Algorithmic trading strategy performance improvement	6,394.41
Localization and mapping	5,950.55
Predictive maintenance	5,713.60
Prevention against Cybersecurity threats	5,385.10
Converting paperwork into digital data	5,370.85
Intelligent recruitment and HR systems	5,295.01
Medical image analysis	5,111.31

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Year	AI Market Size
2021	\$87 billion
2022	\$119.8 billion
2023	\$165 billion
2024	\$227.46 billion
2025	\$313.9 billion
2026	\$433.5 billion
2027	\$599 billion
2028	\$829 billion
2029	\$1,148 billion
2030	\$1591 billion

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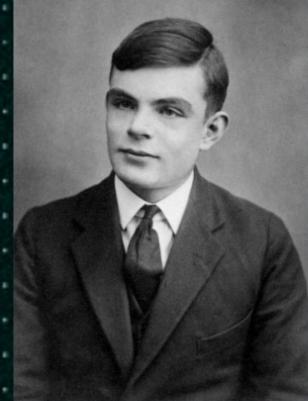
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Evolution

- Notion of "thinking machines" dates centuries into past
- 1947 Alan Turing, father of computer science
- The term AI is traced back to 1950
- Evolution
 - Research on neural networks
 - Applications of machine learning
 - Deep learning
 - New chapters are unfolding every year



Alan Turing

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How does AI work

Scripted AI

- scripted AI behavior
 - uses fixed trigger regions
 - does not truly simulate scouting
 - player can easily defeat AI after knowing what and when it does certain things
- games uses only scripted AI
 - to save resources
 - today's computers would not be able to run real AI
 - In future we might see real AI in games

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- Use of real AI in games?
 - AI learning from player actions
 - Improving game characters throughout the game
 - AI NPC-s in RPG games for better interactions
- Distant future
 - AI developing entire game on it's own
 - Generating environment
 - NPC-s evolving by players actions
 - The progress and ending would differ all the time



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