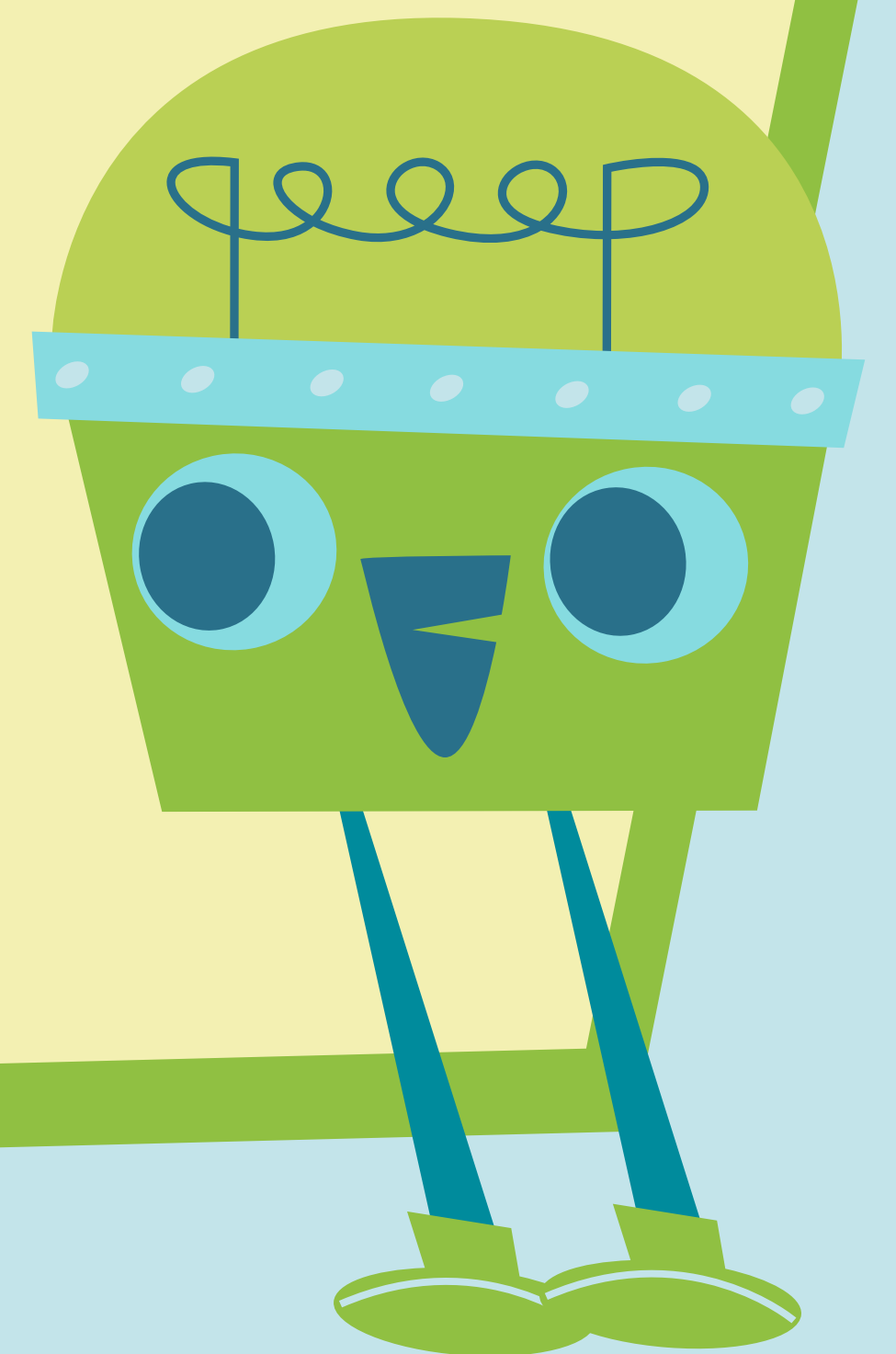


WHY IS AI BOOMING RECENTLY?

Several factors contribute to the recent boom in Artificial Intelligence (AI):



An illustration of a computer monitor with a teal frame. The screen shows three interlocking gears in teal and lime green, and a grid pattern on the right side. A green arrow points from the monitor towards the text box.

ADVANCEMENTS IN TECHNOLOGY:

Significant improvements in computing power, storage capabilities, and processing speed have enabled more complex AI algorithms to be developed and deployed effectively.

BIG DATA AVAILABILITY:

The growth of big data provides AI systems with massive datasets to learn from, enhancing their ability to identify patterns, make predictions, and improve performance.



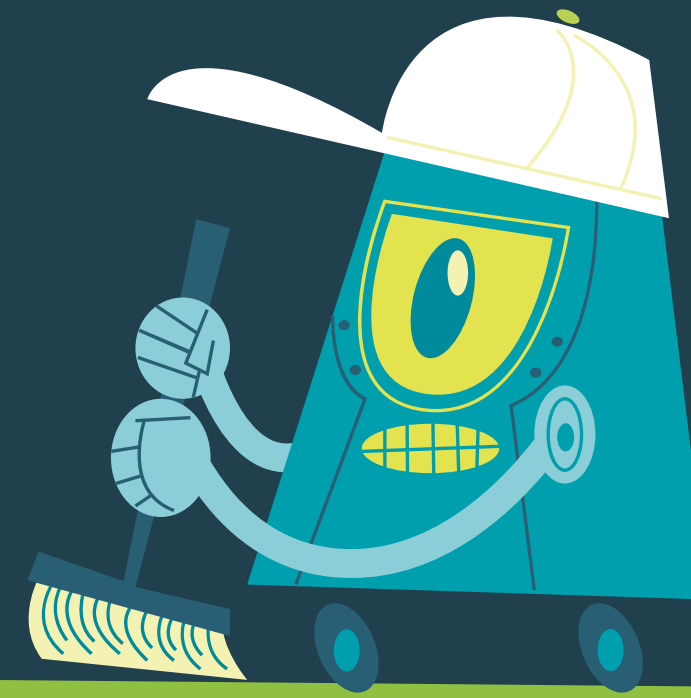
MACHINE LEARNING ALGORITHMS:

The evolution of machine learning algorithms, especially deep learning, has empowered AI systems to achieve unprecedented accuracy in tasks such as image recognition, natural language processing, and speech recognition.

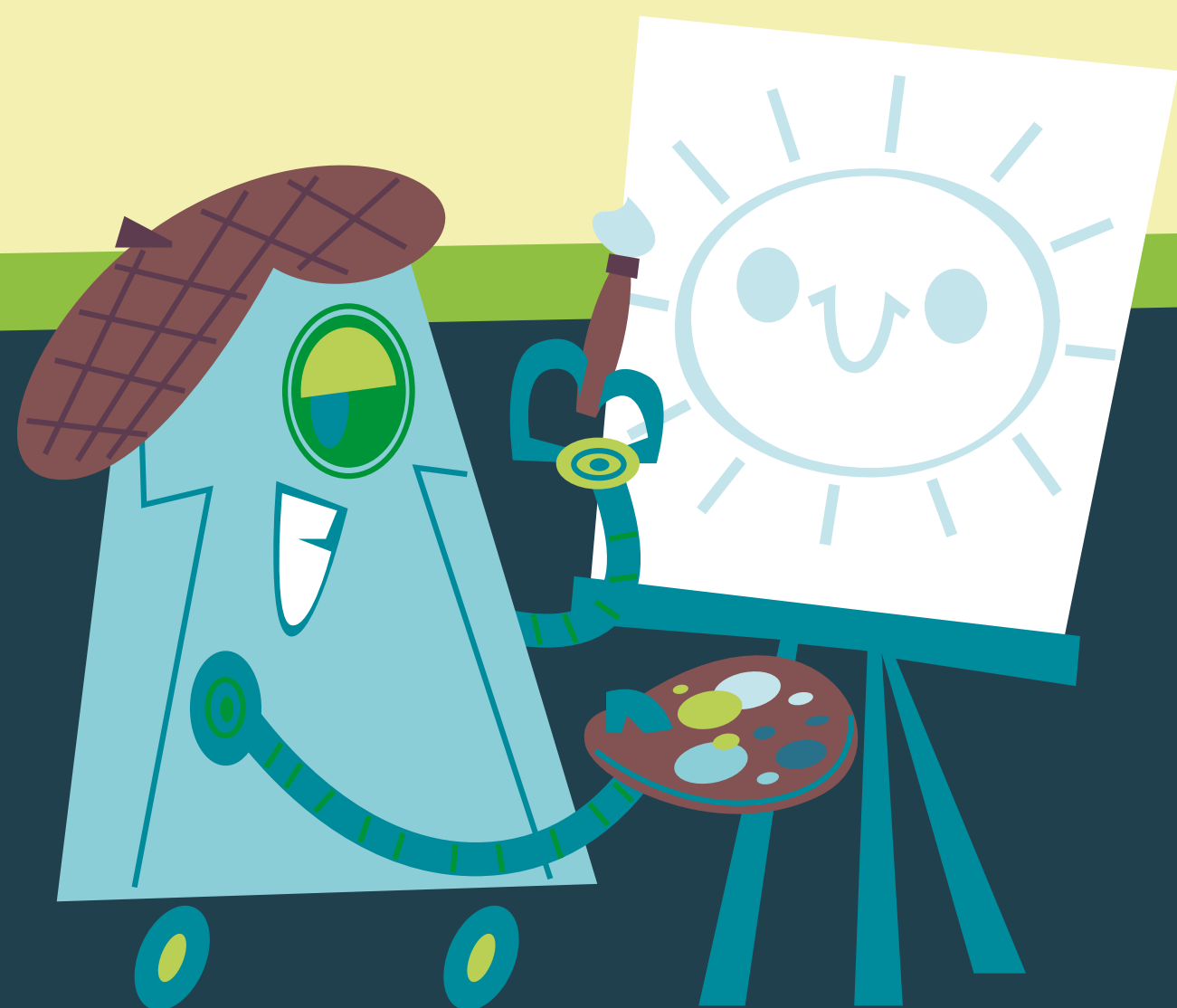


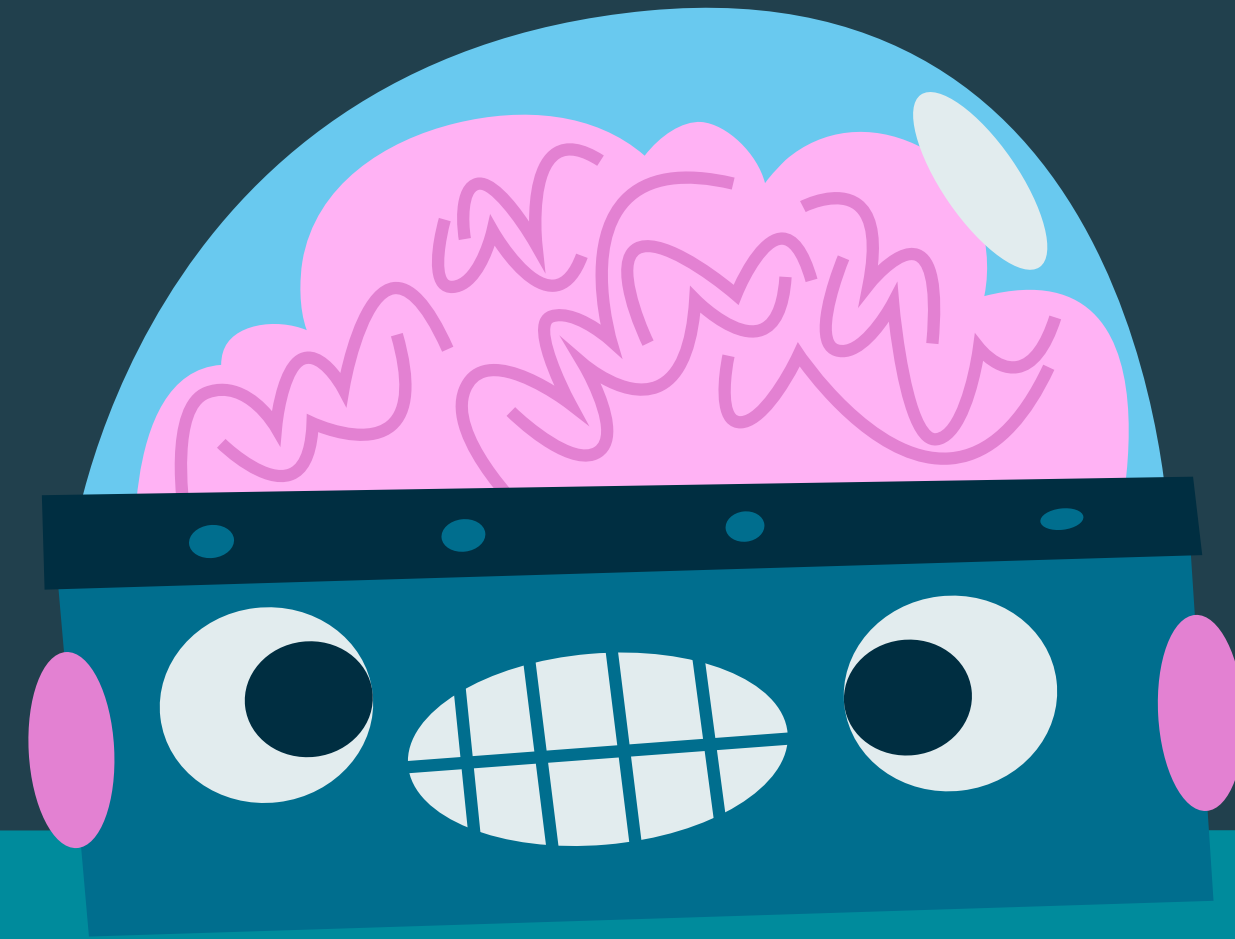
USER EXPERIENCE EXPECTATIONS:

As users increasingly interact with AI-driven technologies, there is a growing demand for more personalized and intuitive experiences, driving the integration of AI in consumer-facing applications.



These factors collectively contribute to the recent surge in AI development and adoption, transforming the technology landscape across industries.





HISTORY OF AI

1950

THE EARLY DAYS OF AI

The first AI programs were developed in the 1950s.

- Exemplary Application: "Turing Test" program developed by Alan Turing in 1950.
- Description: This program was one of the first developed to test the intelligence of systems, requiring them to exhibit behavior similar to humans.

1970

THE RISE OF AI

AI research began to make significant progress due to the development of new algorithms.

- Exemplary Application: ELIZA, a natural language processing system.
- Description: ELIZA, developed by Joseph Weizenbaum in the late 1960s, was a system that interacted with users using natural language, making it seem like a conversation with a human.

1980

THE AI WINTER

A period of decline due to funding and solving problems.

- Exemplary Application: "Turing Test" program developed by Alan Turing in 1950.
- Description: This program was one of the first developed to test the intelligence of systems, requiring them to exhibit behavior similar to humans.

1990

RESURGENCE OF AI

A comeback due to the development of new hardware and software technologies.

- Exemplary Application: IBM Deep Blue.
- Description: Deep Blue was a chess-playing computer developed by IBM. In 1997, Deep Blue won a chess championship against world champion Garry Kasparov.

2023

CURRENT STATE OF AI

A rapidly growing field with a wide range of applications.

- Exemplary Application: AI assistants like Siri and Alexa.
- Description: Personal assistant applications use artificial intelligence techniques to understand and respond to user commands naturally, providing personalized information and recommendations.

Artificial Intelligence (AI) has made significant contributions across various fields, transforming industries and enhancing capabilities. Here are some key areas where AI is making an impact:

Medical

Art

Military

Research

Manufacturing

Finance

Drug
manufacturing

Marketing

Transportation

Entertainment

**AI
APPLICATIONS**



AI APPLICATIONS

IMAGE RECOGNITION

AI has the capability to detect and categorize objects within images, which includes applications like using facial recognition for security purposes or diagnosing illnesses in medical imagery, such as X-rays.



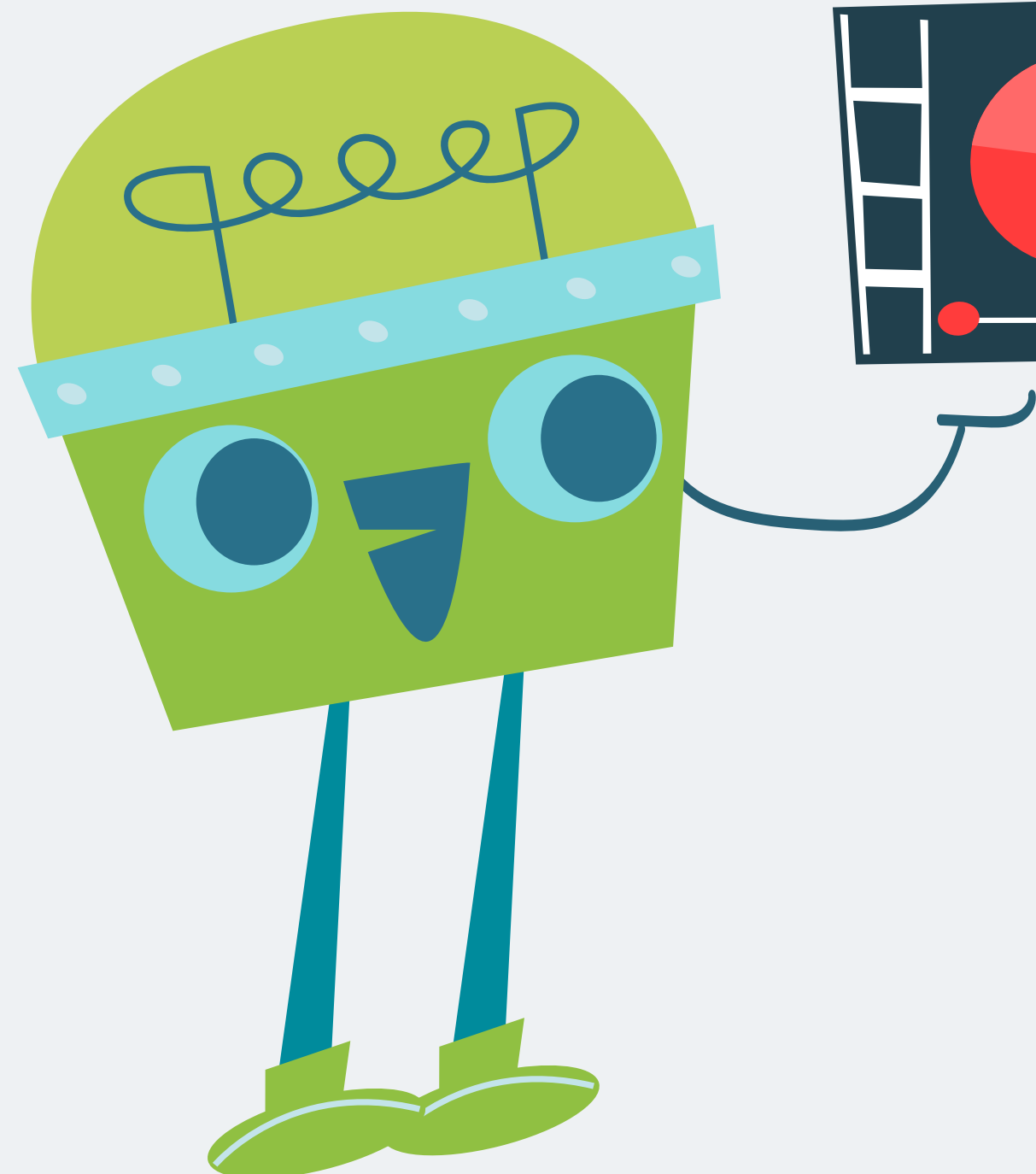
HI SIRI!

SPEECH RECOGNITION

AI applications, such as virtual assistants like Siri or Google Assistant, have the ability to transform spoken words into written text and carry out instructions based on those commands.

LANGUAGE TRANSLATION

AI-driven translation services, like Google Translate, are capable of automatically converting text and speech from one language to another.

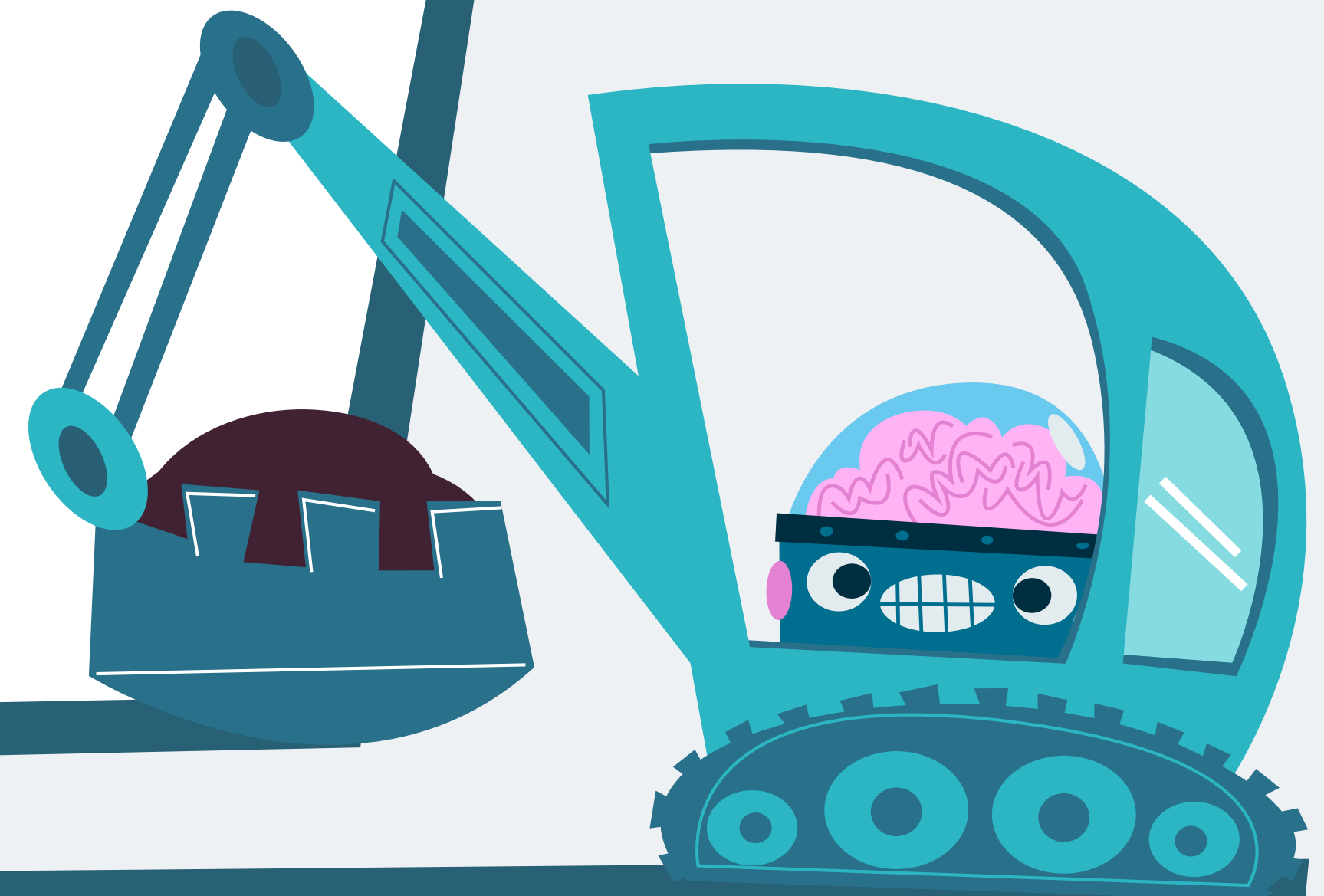


RECOMMENDATION SYSTEMS

AI is employed by online platforms such as Netflix and Spotify to recommend movies, shows, or music tailored to individual user preferences and past behaviors.

AUTONOMOUS VEHICLES

Self-driving cars and trucks utilize AI for navigation, collision avoidance, and decision-making while on the road.



CHATBOTS

AI-enabled chatbots and virtual assistants are designed to engage in dialogues and provide assistance to users.



AI-RELATED CHALLENGES



TECHNICAL LIMITATIONS

- Computational Power: AI's dependency on extensive computational resources (GPUs, Memory..) limits its scalability and accessibility.
- Data Quality and Availability: The effectiveness of AI is constrained by the availability and quality of training data.
- Generalization and Robustness: AI systems often struggle to adapt and perform reliably in new or varied situations.
- Algorithmic Complexity: The complexity of AI algorithms poses challenges in understanding, optimization, and deployment.

ETHICAL AND SOCIAL LIMITATIONS

- Ethical and Responsible Use: Ensuring AI's development and application align with ethical standards and human rights.
- Bias and Fairness: Addressing inherent biases in AI to prevent discrimination and ensure equitable outcomes.
- Transparency and Explainability: Making AI systems understandable and their decisions interpretable to users and developers.
- Data Privacy: Protecting personal data amidst AI's need for large and diverse datasets.