

ADAPT ARTIFICIAL

❖ How AI can enable people to overcome physical disadvantages

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PROBLEM **STATEMENT**

In 21st century AI has become inevitable and everything in this world with the help of AI is done so easily and can be operated 24X7 without interruptions and downtime but people having physical disabilities like lack of adequate strength, incapacities or people with mental or physical disadvantages might not be able to adapt themselves in the comfortable zone. These people may be require at least one person to do their daily chores or are reliant to take care of them. They struggle in this modern world where everything can be sorted with AI.

PROJECT OBJECTIVE

This project aims to solve this problem by enabling user to use artificially intelligent robot which will use different AI technologies which could help them to build their cognitive skills, help them in their daily chores to make their lives little easier and help them in decision making.

- For teaching cognitive skills AI tool Theory of Mind can be used- the ability of the human mind to attribute mental states to others.
- Using computer vision which will allow system to derive meaningful information from digital images, videos and other visual inputs and take actions or make recommendations based on that information.
- voice assisted technology which can enables individuals with disabilities to access information much easier, all just by speaking to their devices. Through simple voice commands they can control nearly every aspect of their home
- installing Natural language processing(NLP) ; speech to text and text to speech for people with speech impediments and voice systems which can learn speaker's pronunciation over time and translate the user's words into clear and normalized speech

PROJECT FEATURES

Theory of
mind

Computer
vision

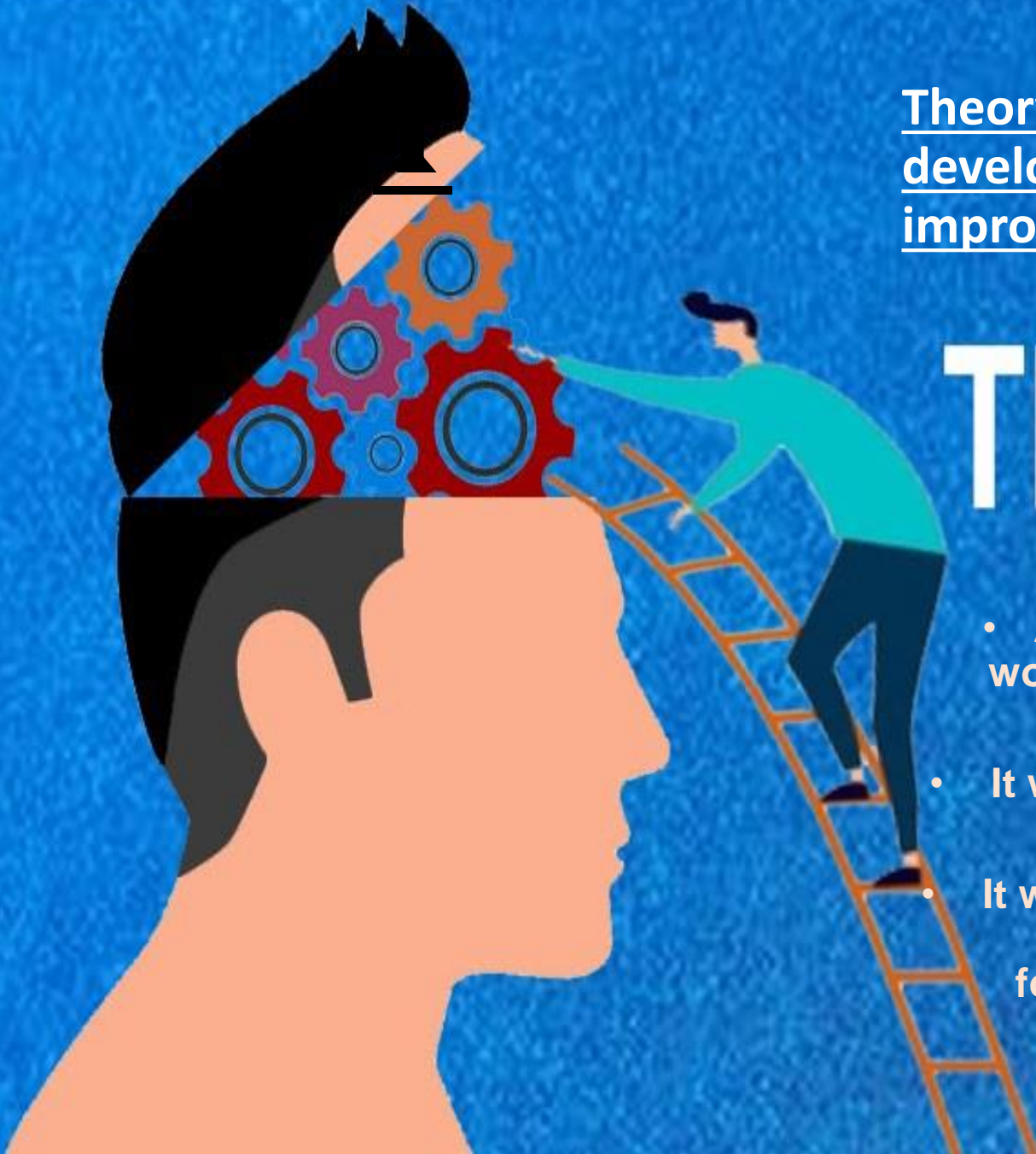
Voice
assisted
technology

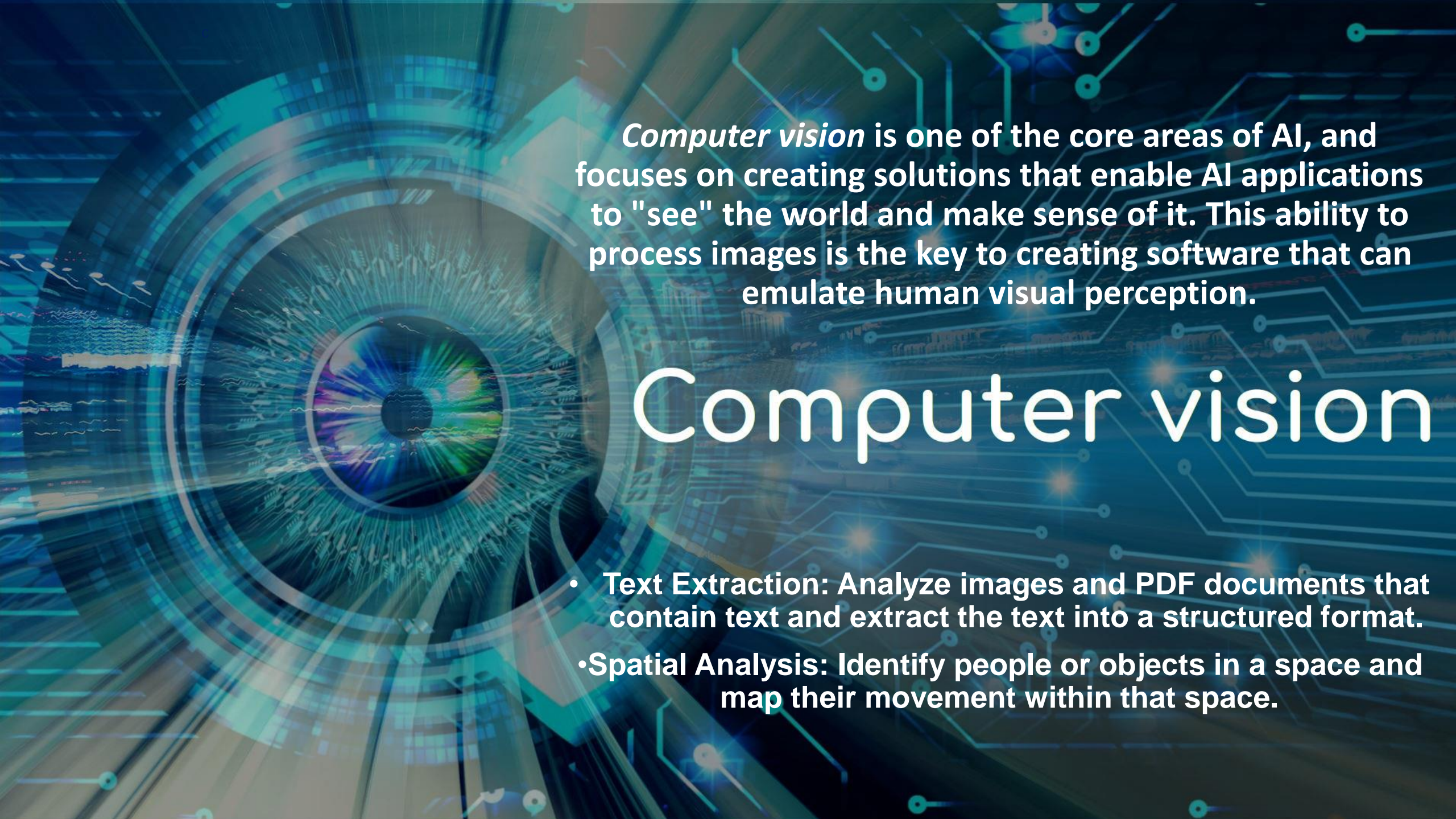
NLP and
voice
systems.

Theory of Mind will help disabled people to develop their cognitive skills, and would help improve autism.

THEORY OF MIND

- A robotic system possessed with theory of mind would allow for social interactions between the robot and humans.
- It will represent the mental states of others, including their desires, beliefs, and intentions.
- It will help children/people with special needs to reach their real potential by individualized training and focusing more on the areas which they specifically need to improve





Computer vision is one of the core areas of AI, and focuses on creating solutions that enable AI applications to "see" the world and make sense of it. This ability to process images is the key to creating software that can emulate human visual perception.

Computer vision

- **Text Extraction:** Analyze images and PDF documents that contain text and extract the text into a structured format.
- **Spatial Analysis:** Identify people or objects in a space and map their movement within that space.

VOICE ASSISTED TECHNOLOGY



- ❖ **AI-voice-assisted technologies will enable individuals with disabilities to access information much easier, all just by speaking to their devices.**
- ❖ **Through simple voice commands they can control nearly every aspect of their home from setting alarms and reminders, playing music, making to-do lists, providing real-time information , cleaning**
- ❖ **AI voice assisted technology can be very helpful for people living with disabilities as it will assist them in moving around the home, and support more independent living.**

Natural language processing (NLP) is the area of AI that deals with creating software that understands written and spoken language. With the help of NLP we will create a software called Text Summarisation.

Natural Language Processing

- People who suffer with dyslexia, may find difficult read the context that consist long paragraphs.
- This difficulty can be solved by developing a module, using natural language processing which has a weighted dictionary which ranks the words according to the weightage and summary the whole context into shorter one and give them a pictorial representation if need.

THANK YOU



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