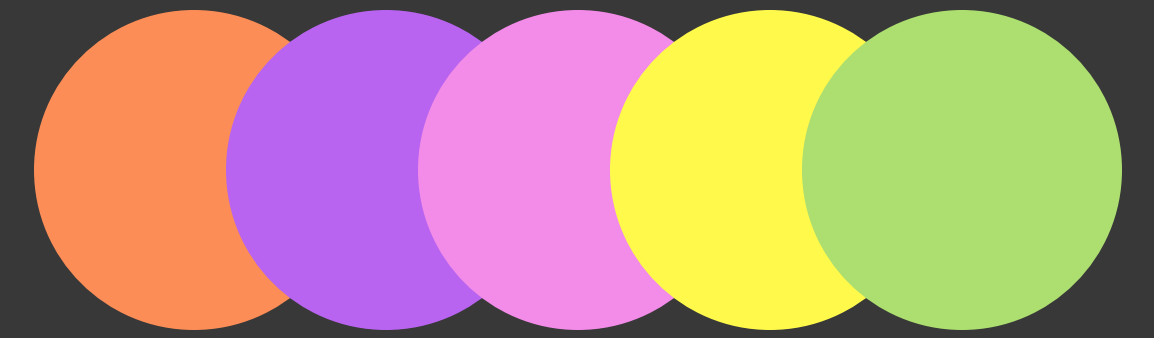
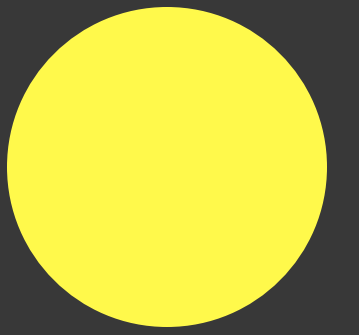


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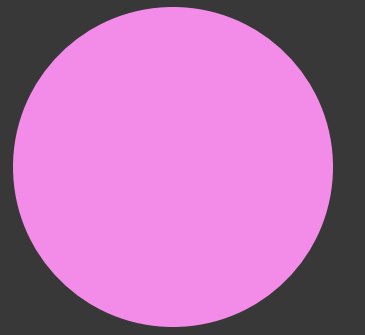
INF 1003 | Edward & Sonia

Voice User Interface



1. Introduction
2. History of VUI
3. How VUI Works
4. Applications of VUI
5. Benefits and Challenges
6. Ethical and Social Implications
7. The Future of VUI
8. Conclusion

What's “VUI”

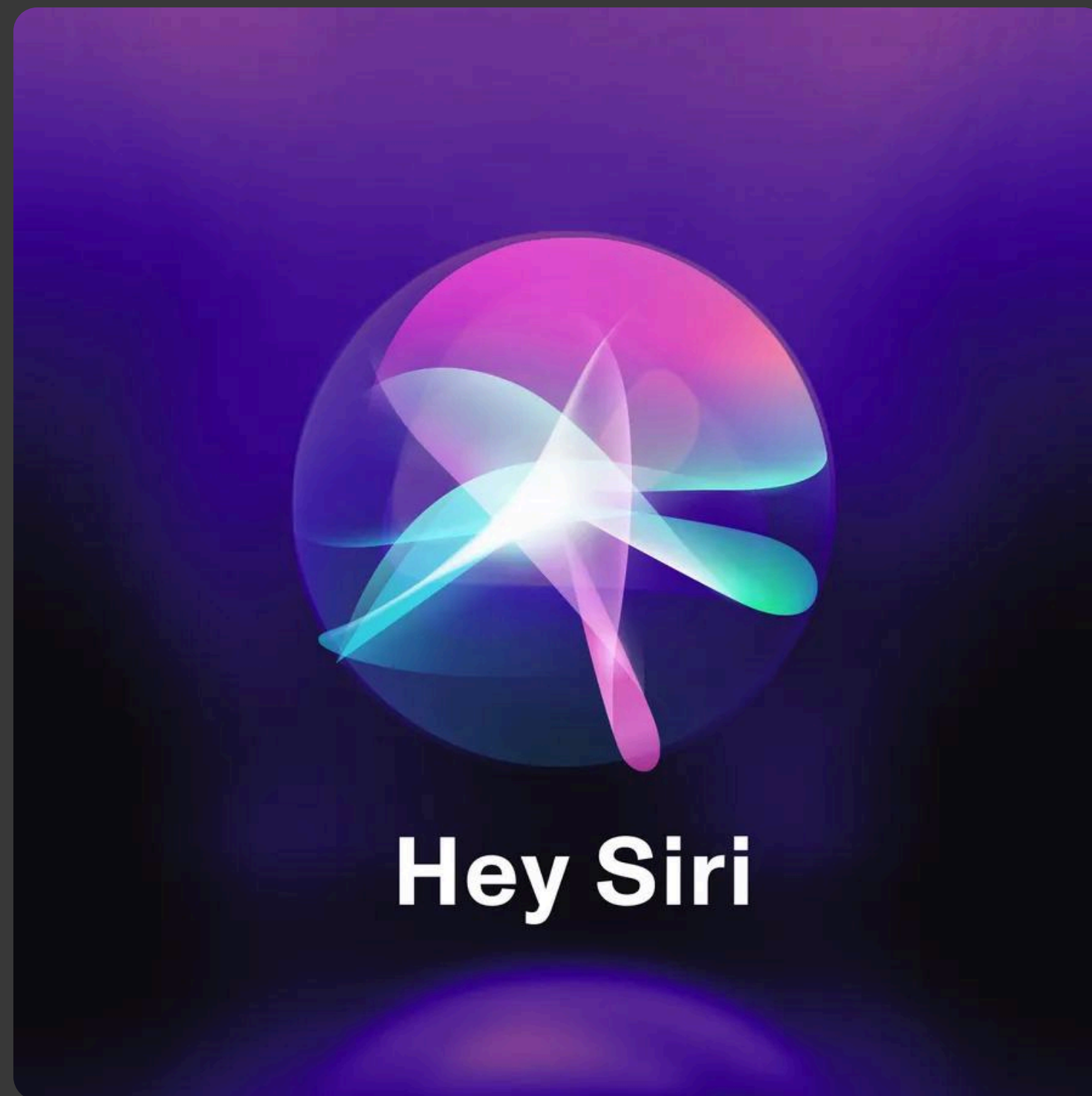


A VUI allows users to interact with technology using voice commands. Instead of typing or touching, users speak, and the system interprets and responds.



History of VUI

- 1960s–1980s: Early voice command systems
- 2000s: Introduction of smartphone assistants
- 2010s–Now: Rise of smart speakers and voice-enabled devices



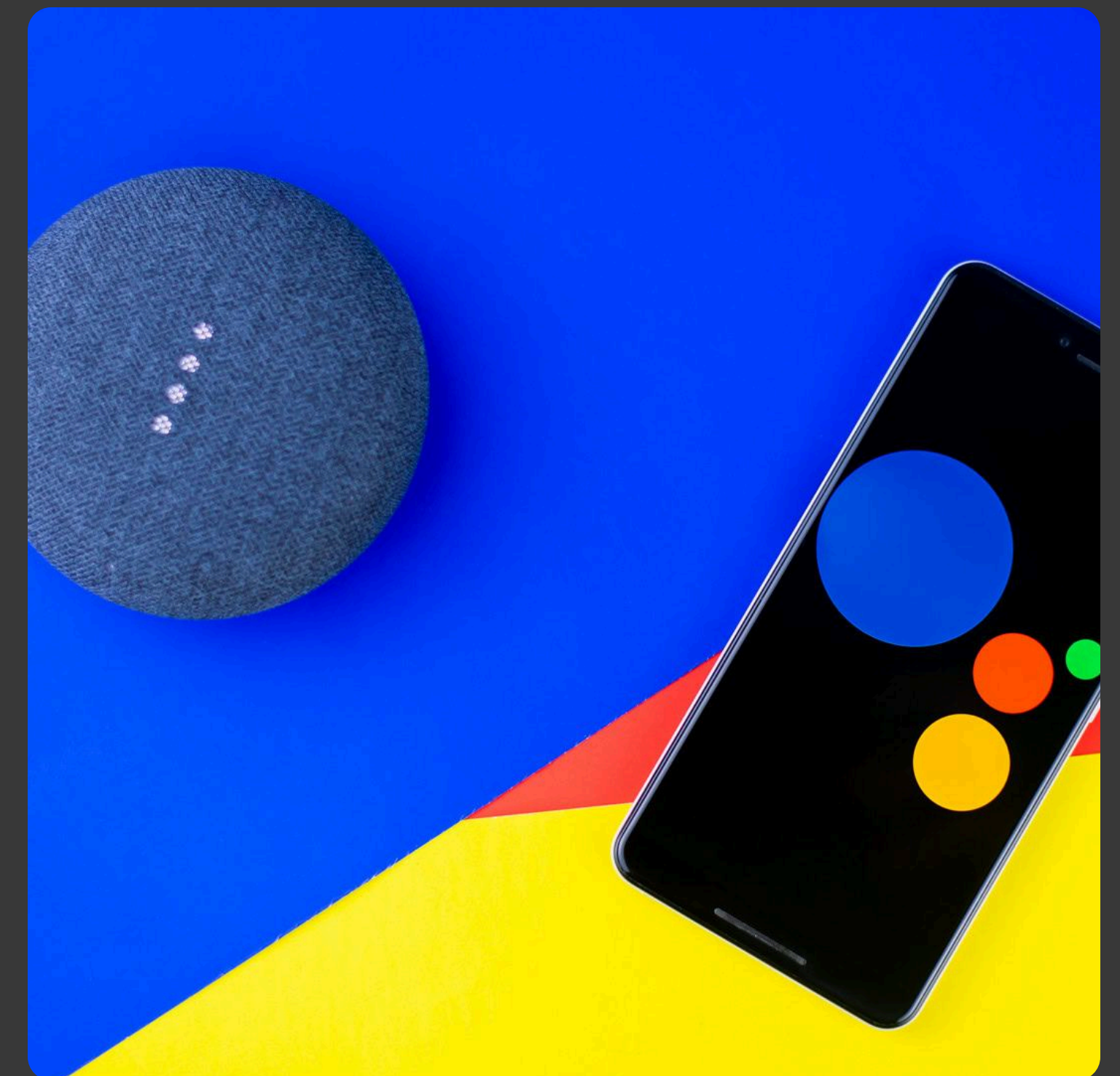
Apple Siri

Apple's voice assistant for iPhones and other devices, used for tasks like messaging and setting reminders.



Amazon Alexa

Amazon's smart assistant in Echo devices, used to control smart homes, play music, and more.



Google Assistant

Google's AI helper for phones and smart devices, offering voice search, commands, and automation.

Why VUI matters



01

Hands-free

Allows users to interact without touching a screen, ideal for multitasking, driving, or cooking.

02

Accessibility

Enables people with visual, motor, or reading impairments to use technology more easily.

03

Convenience

Offers quick access to information and actions with just a voice command, no typing needed.



Speech Recognition

Converts spoken words into text



Natural Language Processing (NLP)

Understands meaning and intent



Text-to-Speech (TTS)

Converts text responses into spoken words



Smart Homes

e.g., turning on lights,
playing music



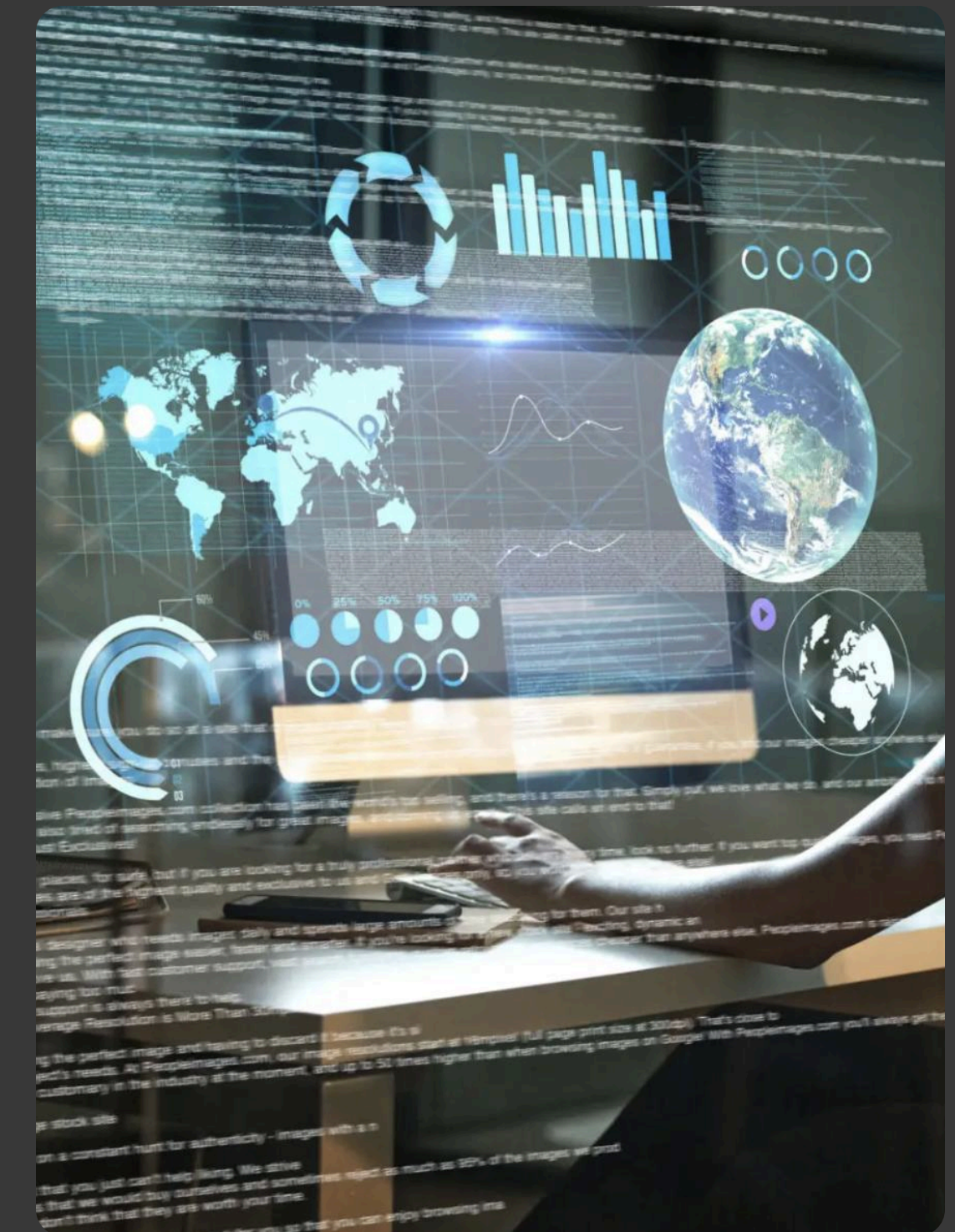
Healthcare

e.g., voice-enabled
assistants for the
elderly



Automotive

e.g., in-car voice
commands



Enterprise

e.g., voice-based
customer service

Benefits



Hands-free



Accessibility



Speed & Efficiency

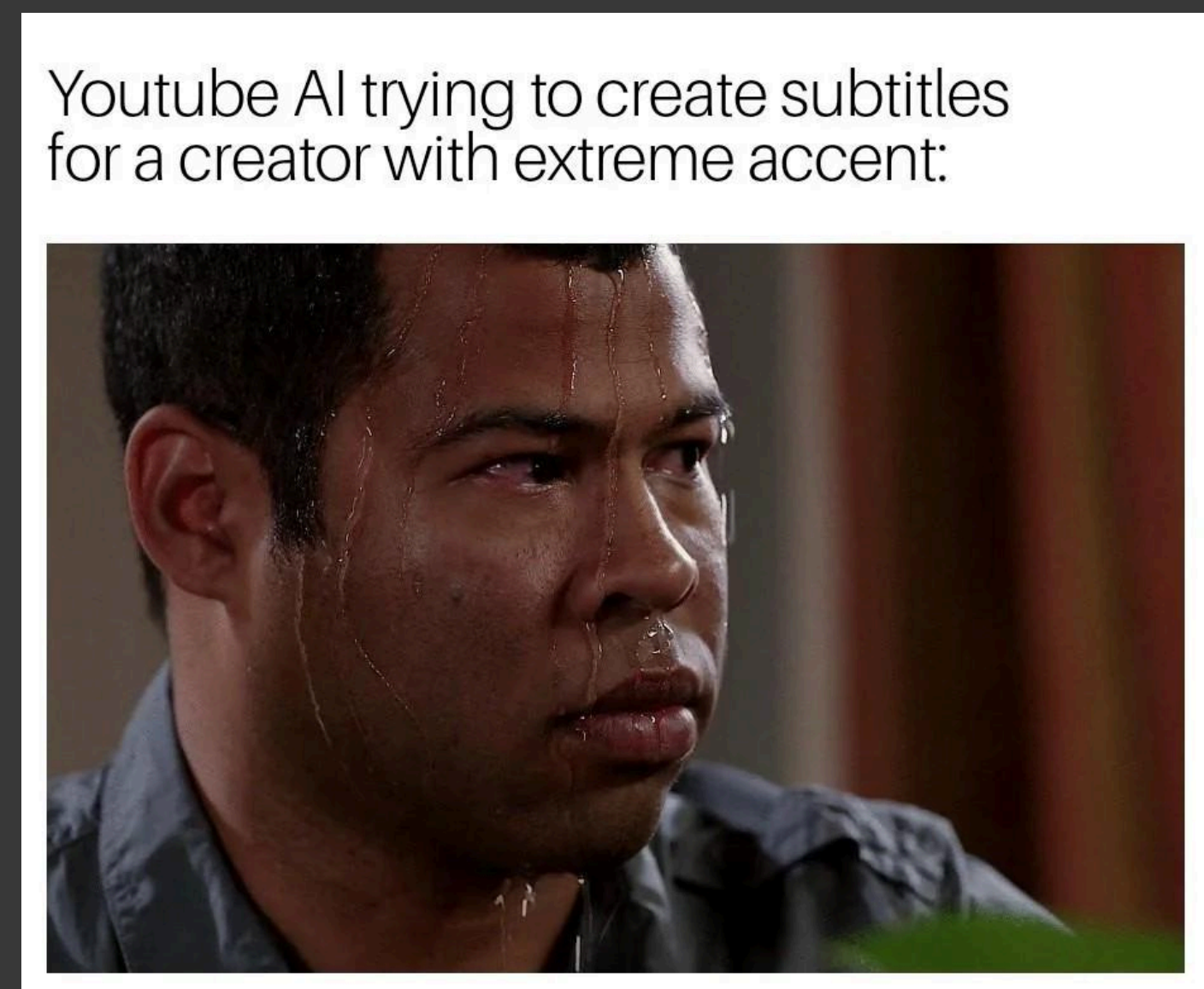
...and Challenges



Accuracy & misinterpretation

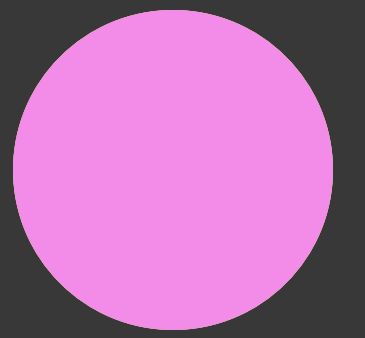


Privacy & data concerns



Accent & bias issues

Ethical & Social Implications



Surveillance
& Voice Data



Algorithmic
Bias

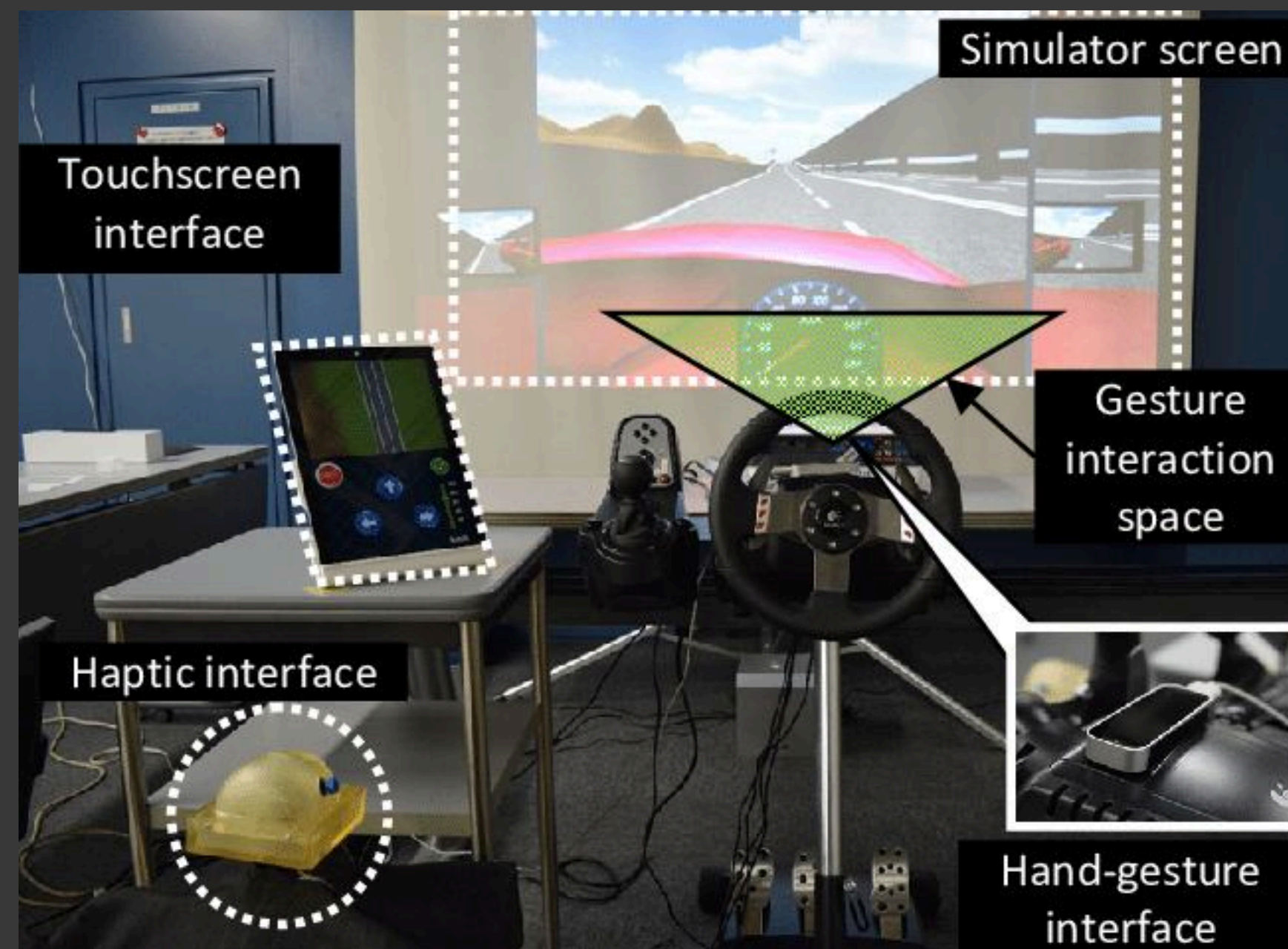
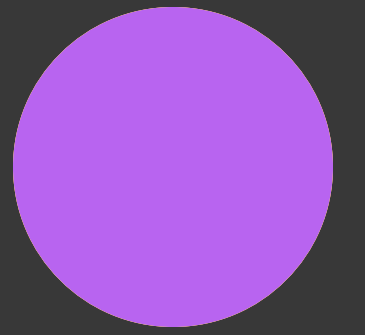


Consent &
transparency

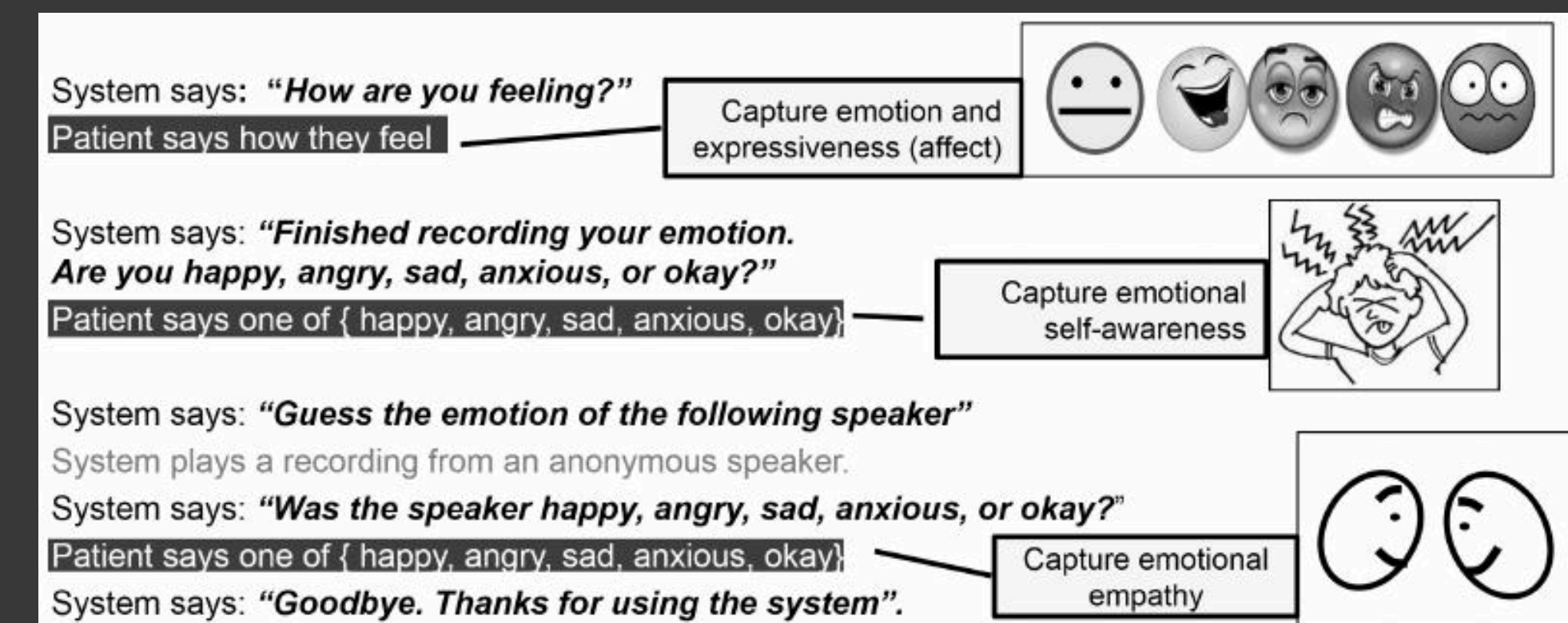


Impact on
employment

The Future of VUI

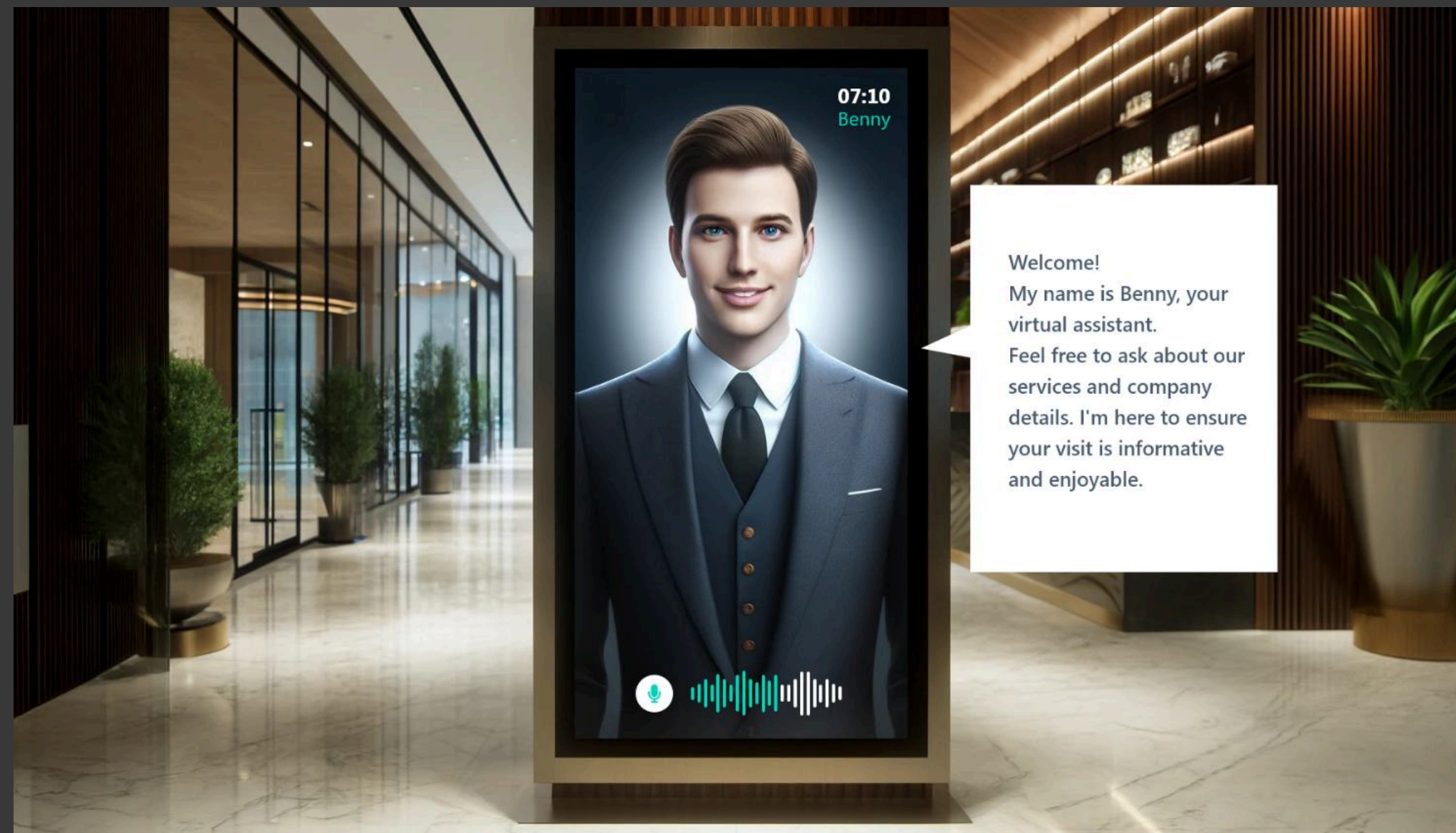
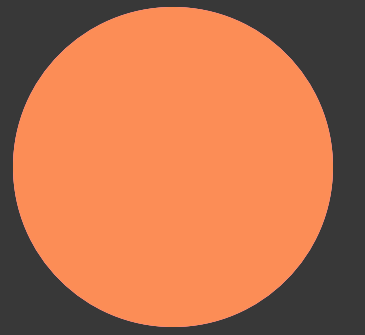


Multimodal Interfaces
(voice + screen + gesture)

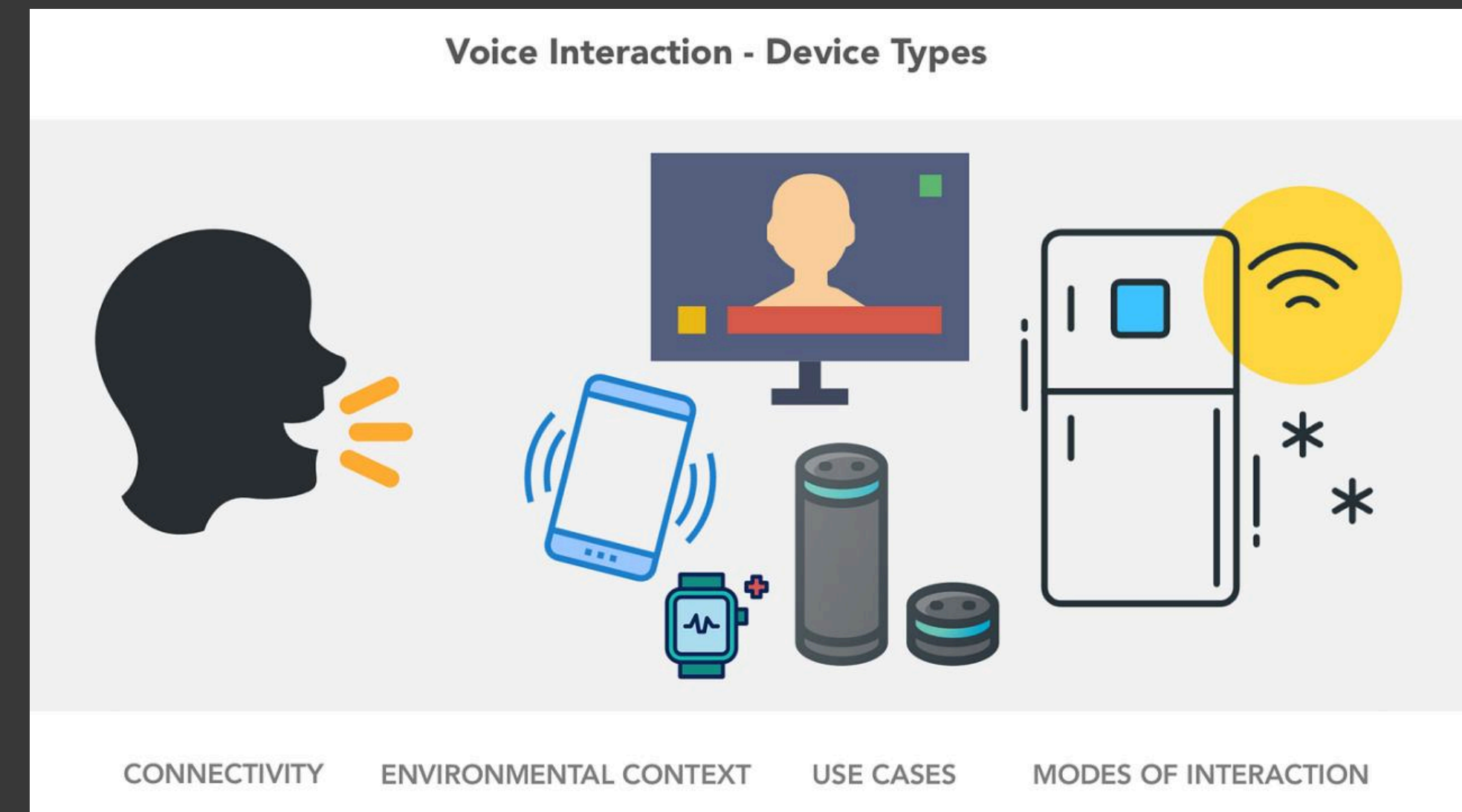


Emotion & Context Awareness

The Future of VUI

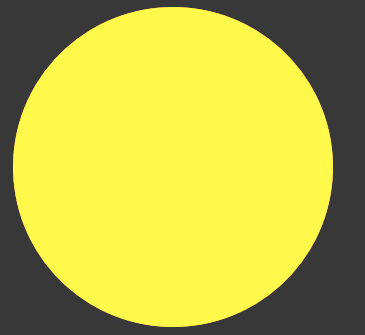


AI Avatars & Robotics



Seamless Smart Environments

Conclusion



01

What We've Covered:

- Definition
- history
- core tech
- applications

02

Key Insights:

- Benefits vs Challenges
- Ethical & Social Implications
- Future Trends

03

Final Reflection

VUIs blend human speech with computing to reshape how we live, work, and interact.



Thank you!