

e||pact

Artificial Emotional Intelligence

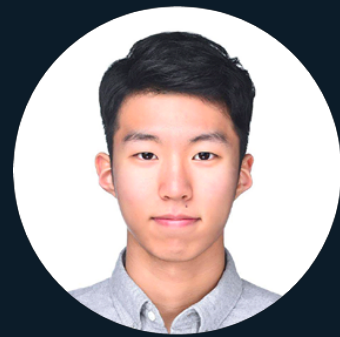


Alexander Wu

Freshman

AI and Deep Learning
Researcher

Graphic Designer



David Lee

Freshman

AI and Deep Learning
Developer

Full Stack Developer

Problem

Currently, there is a huge disconnect between humans and technology. We interact and use our machines like tools instead of utilizing their intelligence. This chasm is created by technology's inability to truly understand us.

We want to give technology emotional intelligence. We want technology to truly empathize with its users: to revolutionize user experience.

Target Users & Insights

65%

65% of people who own an Amazon Echo or Google Home can't imagine going back to days before they had a smart speaker.

[GeoMarketing](#)

72%

72% of people who own voice-activated speakers say that their devices are used as part of their daily routines.

[Google](#)

1 in 6

One-in-six Americans own a voice activated smart-speaker

[Edison Research](#)

Key Findings



Interactions with voice assistants feel robotic and cold.



With the development of AI, emotional understanding is necessary.



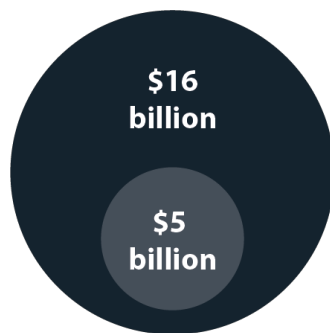
We interact with technology like dumb tools instead of intelligent machines

Market Research



55% of all households in the United States will own a smart speaker by 2022

[OC&C Strategy Consultants](#)



In 2018, the size of the virtual digital assistant market was worth \$5 billion. In 2021, it will be worth \$16 billion

[Statista](#)

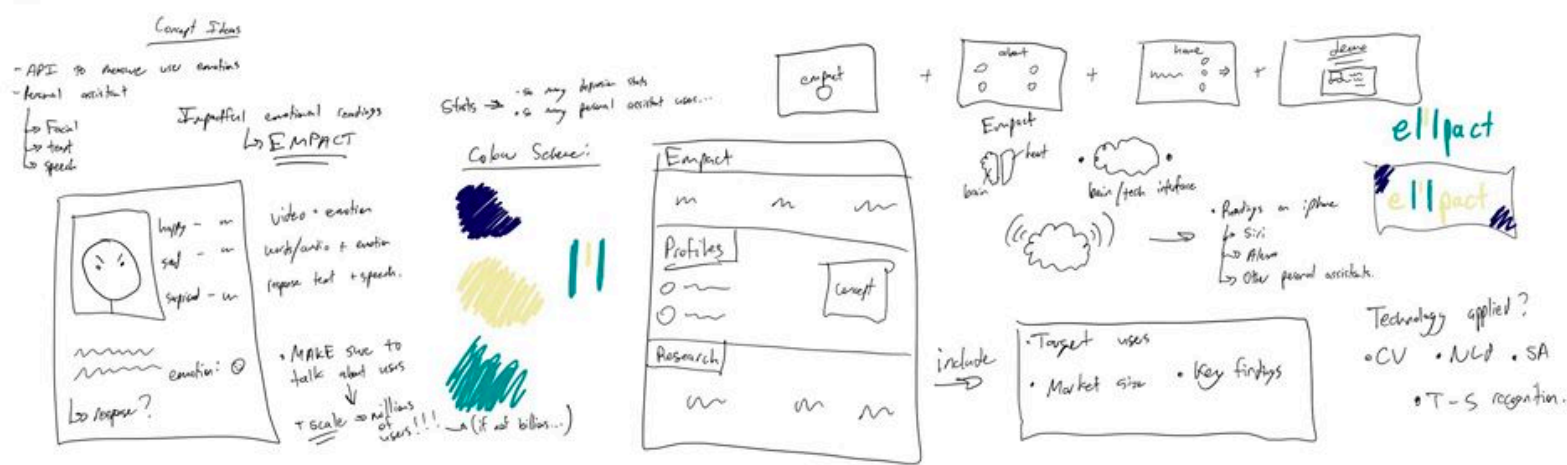
50%



50% of all searches will be voice searched by 2020

[ComScore](#)

Concept Sketches



Applied Technology

AI/Deep Learning

Computer Vision

To analyze facial expression and the emotion associated with the expression

Natural Language Processing

To analyze audio speech, understand the words, and the emotion in the tone

Sentiment Analysis

To analyze what is said, and the emotion that is implied.

Text-to-speech and Speech recognition

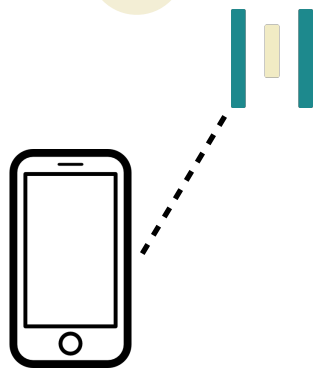
User Scenario

1



User interacts with technology or virtual digital assistant

2



Empact runs in the back, making sense of the user's emotions

3



User and technology can finally understand each other! This creates a whole new user experience

Final Design

EMPACT



Facial Emotion:

Happy: 99.93%

Face: 😊

Clicked the start button
The detector reports initialized

Vocal Emotion:

Happy: 93.09%

START STOP RESET

Hey Jarvis order me some food



EMPACT



Facial Emotion:

Sadness: 100.00%

Face: 😞

Clicked the start button
The detector reports initialized

Vocal Emotion:

No input

START STOP RESET

Hey Jarvis order me some food

Jarvis: Yes, of course! What would you like?

Whatever you want

