

# CUEMEIN

RUNTIME TERROR:  
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*Special  
Olympics*





“Special Olympics is a global movement that unleashes the human spirit every day around the world through the joy of sport.”

Special Olympics

# 26%

of all U.S. adults have  
some type of disability

Source: [cdc.gov](https://www.cdc.gov)



# 10.8%

of these disabilities are  
cognitive-based

Source: [cdc.gov](https://www.cdc.gov)



# Problems

- COVID → virtual communication
- People with certain intellectual disabilities struggle with online communication
- No existing online tools that cater to intellectual disabilities

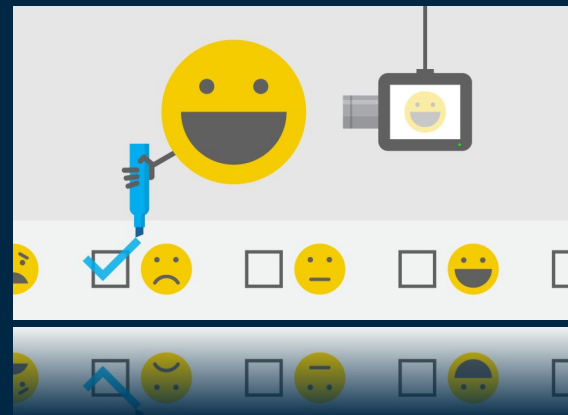
# Solutions

- Accessibility & Usability
- Emotion Detection



# Emotion Detection

- Facial Expression Recognition
  - Video conferencing
  - Real-time sentiment analysis
- Emotion Recognition via Speech
  - Audio conferencing
  - When cameras are unavailable



# Accessibility & Usability

- Simple navigation
  - Tab navigation & Large UI
- UI rooted in research
  - Accommodate for ASD
- Reaction UI
  - Improve Communication





# Meet the Team

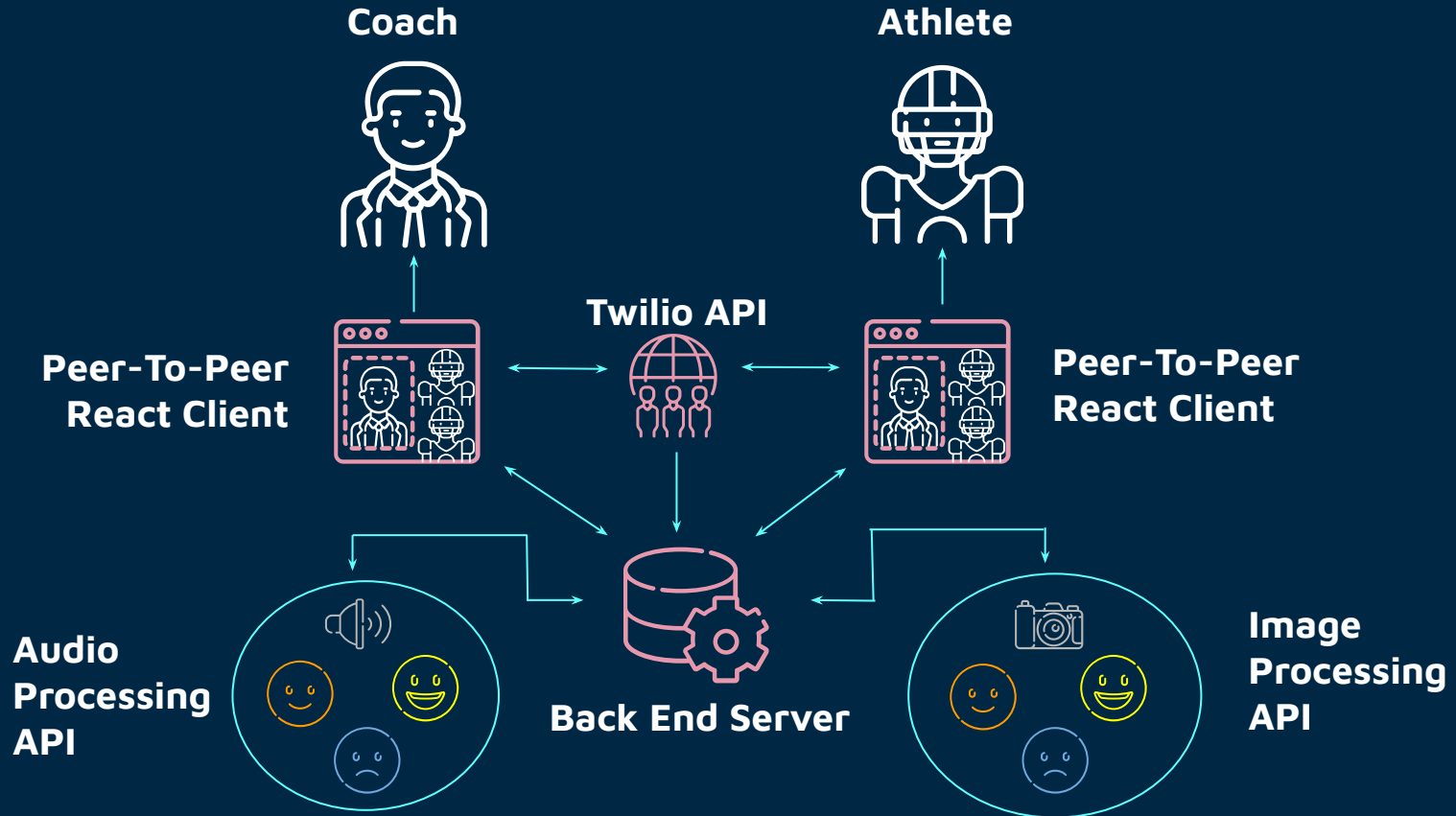
- **Coach:** Jerry
- **Athletes:** Larry and Mike





# CUEMEIN DEMO

# Architecture



# Backend Microservices

Peer-To-Peer  
React Client



Peer-To-Peer  
React Client

Audio  
Processing  
API



Image  
Processing  
API

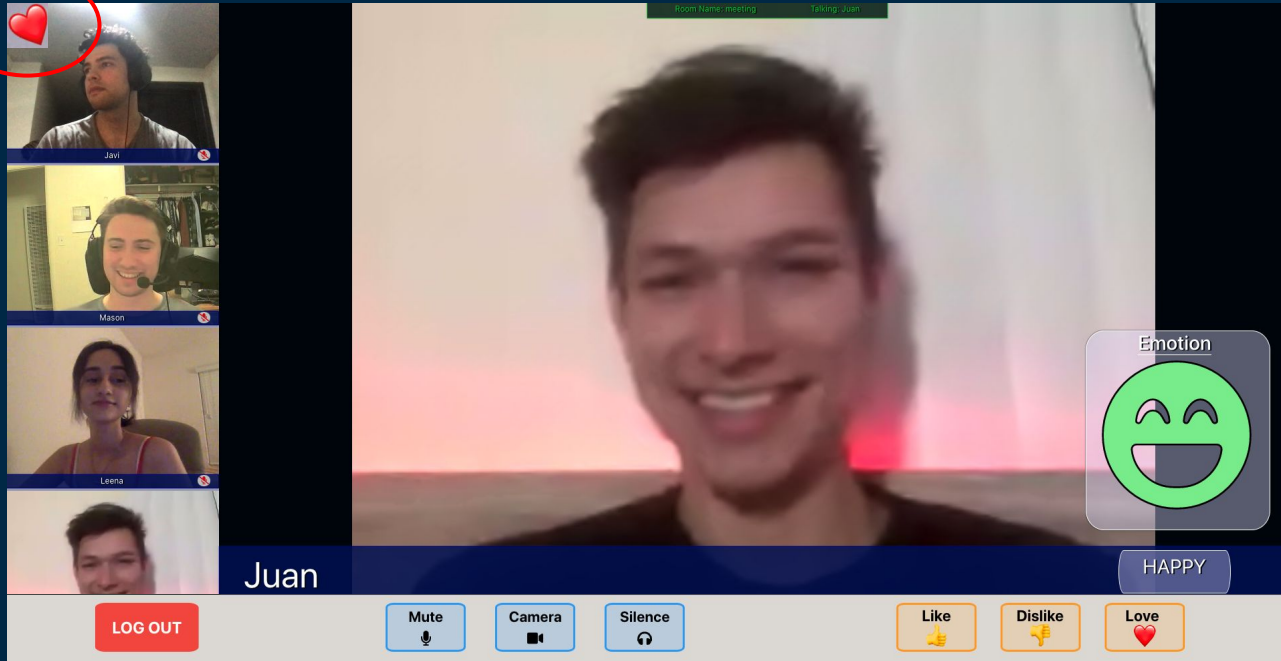


IBM Watson™



Microsoft  
Azure

# Strengths & Improvements



Visible Emotion Icon & Text Display

Participant Reaction Display

Mute Audio, Turn on/off Camera, Silence Buttons

Reaction Buttons



# FINAL TAKEAWAYS

# THANK YOU

Special thanks to the Special Olympics, along with our mentors: John, Nilesh, Meg, Anne, Nidhi, Joe, and Vinita!

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# Questions?

