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Intro: Who Are We?

- **LogMeIn**
  - Software provider, cloud-based remote network tools
- **Special Olympics**
  - World’s largest sports organization for children and adults with intellectual and physical disabilities
What’s The Problem?

- COVID pandemic: communication now virtual
- Certain intellectual disabilities can make online communication challenging
- No existing applications that improve video conferencing experience for people with disabilities
What’s Our Solution?

- Tool for Special Olympics that helps people with certain disabilities to interpret facial expressions and tone of voice
- Read emotional state of dominant speaker in a video call and display emoji that captures the speaker’s current emotion
Demo
Frontend Implementation & Challenges

- Frontend Implementation
  - React JavaScript Library
  - Twilio API

- Frontend Challenges
  - Getting familiarized with React, JS, and Twilio functions
  - React components states
Backend Implementation & Challenges

- **Implementation:**
  - Microsoft Face API for Image Processing
  - IBM Watson for Speech to Text and Audio Processing

- **Challenges:**
  - Familiarizing with Node Js as well as interfacing with Twilio
  - Communication between frontend and backend
- Audio processing for dominant speaker speech
- Analysis for non-dominant users
- Various video conferencing functionalities
  - Chat box, screen share, participants list
- Layout of UI
- Testing
- Move from localhost to hosting service
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