Overview

- Behavioral Specialists need to track individuals on the spectrum increase helpful behaviors.
- Sessions are limited in time and require physical presence.
- Some individuals on the spectrum have difficulties communicating their emotions resulting in harmful behavior.
- EMOTE allows behavior specialists to observe their clients' behavior throughout the day.

Functionality

- Algorithm
  - LOW, MEDIUM, and HIGH
- VR Test
  - Intense stress levels
- Calibrations to individuals
  - Movement of the sensors for accurate placement

Security

- MYSQL database collects sensor data
- Requires username and password authentication
- Database updates every 4 minutes to conserve battery consumption

Battery

- EMOTE has a life span of 8 hours
- EMOTE's battery is a 3.7 V, 1000 mAh lithium polymer battery
- Data is being sent from the microcontroller to database every 4 minutes to conserve battery consumption
- EMOTE charges by a micro-USB connection

LTE Connectivity

- AT&T carrier
- Boron Particle LTE CAT-M1
- 20 dB higher signal strength

Components

- Particle Boron Microcontroller
- GPS Module
- Galvanic Skin Response Sensor
- Pulse Sensor
- Electromyography Sensor
- Lithium Polymer Battery

Conclusion / Future Work

- PCB Compaction
- GSM
- Multiple Users
- Customizable
- Display Battery Level

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