Accelerating

Accessibility

A day in the life of a high school student

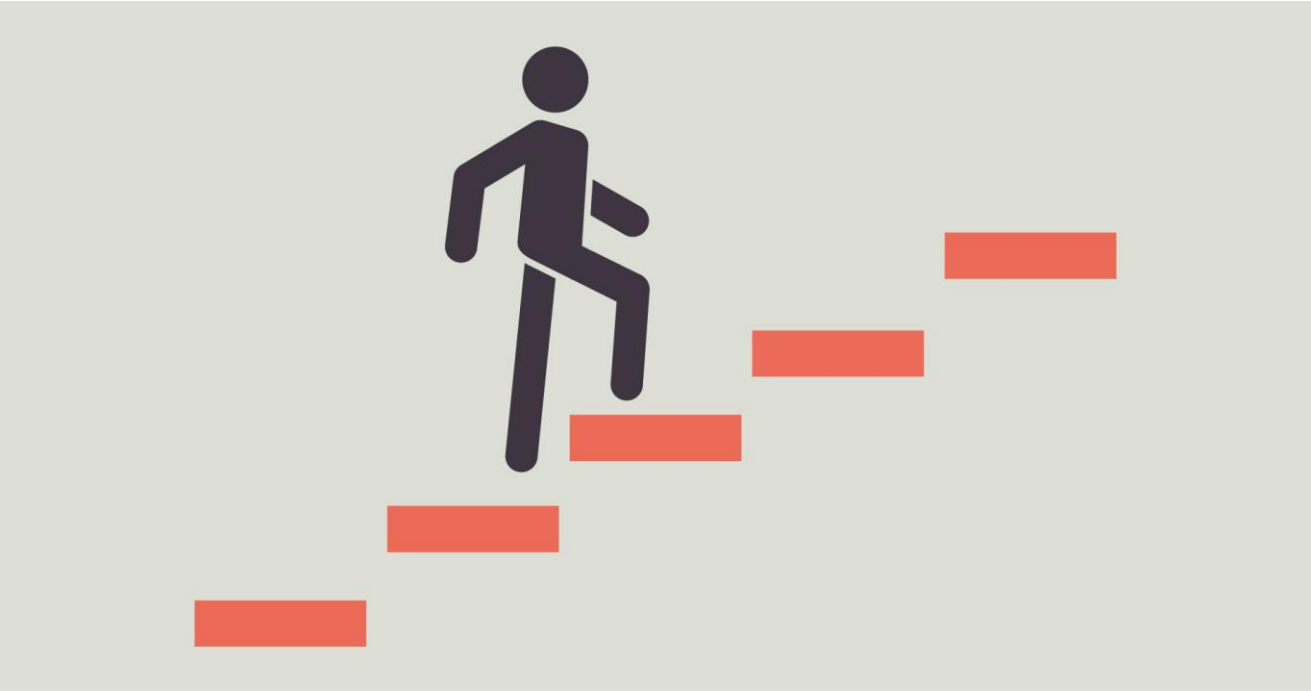
But Imagine….

Our Mission

We strive to make human interaction with technology intuitive and truly accessible for all people.

The First Step

- Our first step in this market is to connect teens affected by cerebral palsy to smartphones. We will focus only on this during our first year.



Problem Statement

As of 2019, 133,000+ children between the ages of 12-18 live with a form of severe CP , which drastically reduces motor control and results in feelings of isolation, dependence, and a lack of self worth.

Existing Solutions

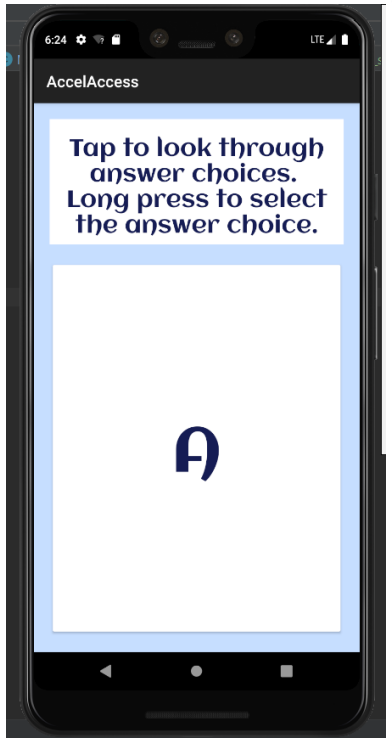
Only Web-browsing

Low user-rating and retention rate

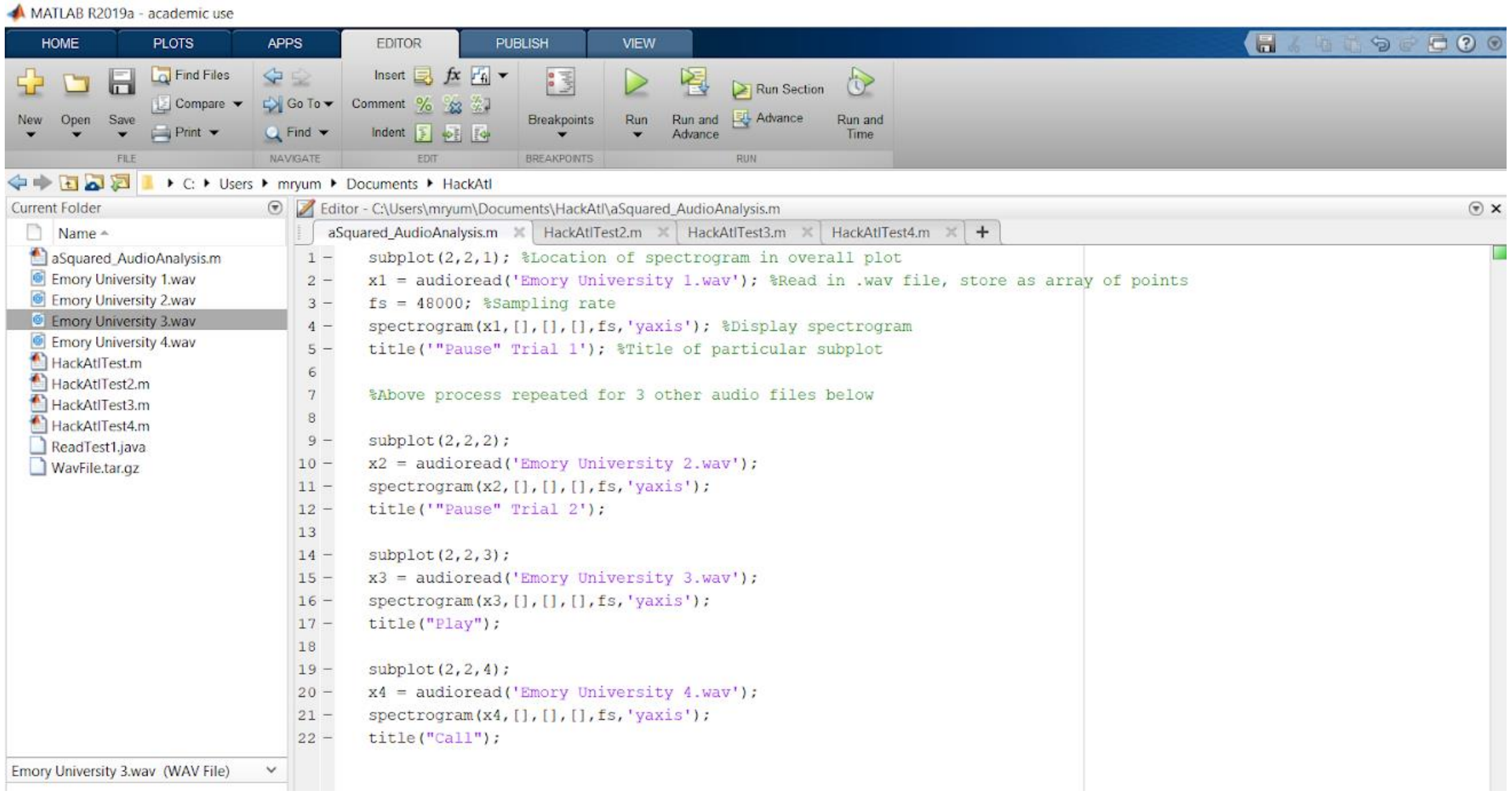
Our Solution

State Machine

Music Player and Testing



Google Assistant Integration for Access to all apps


MATLAB R2019a - academic use
HOME
PLOTS
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EDITOR
PUBLISH
VIEW
New
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Find Files
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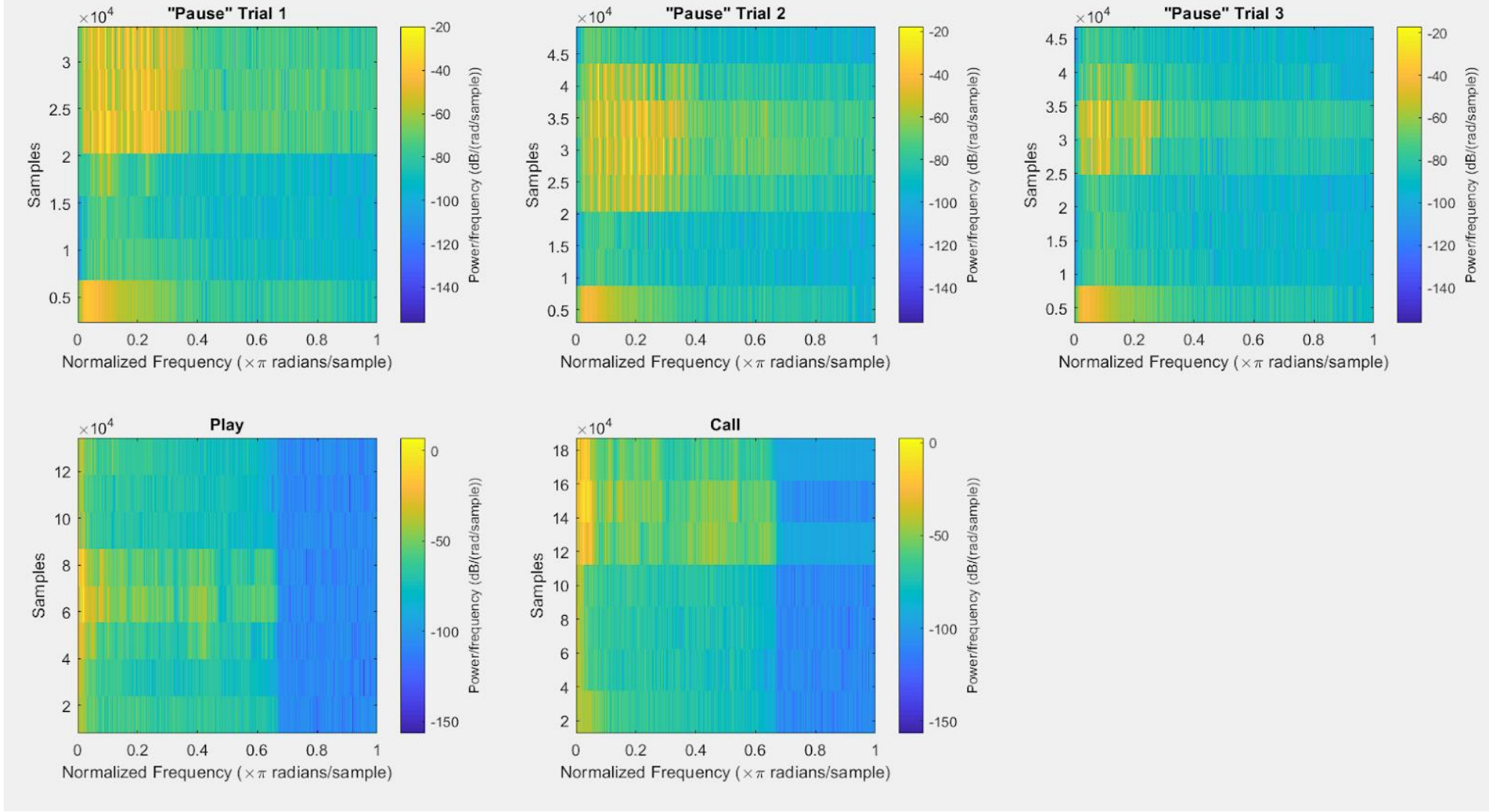
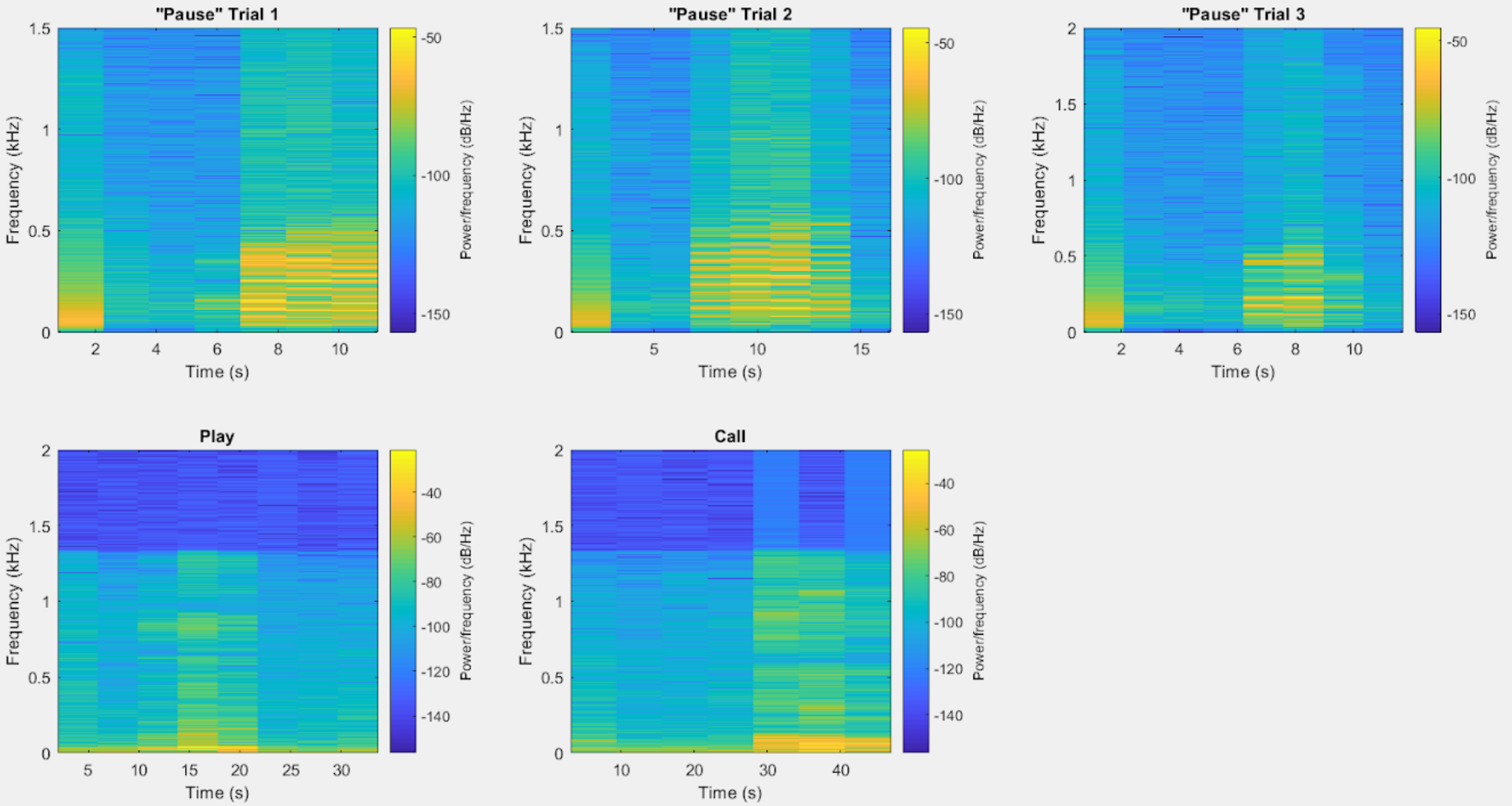
FILE
NAVIGATE
EDIT
BREAKPOINTS
RUN
C: ▸ Users ▸ mryum ▸ Documents ▸ HackAtl
Current Folder
Name
aSquared_AudioAnalysis.m
Emory University 1.wav
Emory University 2.wav
Emory University 3.wav
Emory University 4.wav
HackAtlTest.m
HackAtlTest2.m
HackAtlTest3.m
HackAtlTest4.m
ReadTest1.java
WavFile.tar.gz
Emory University 3.wav (WAV File)
Editor - C:\Users\mryum\Documents\HackAtl\aSquared_AudioAnalysis.m
aSquared_AudioAnalysis.m
HackAtlTest2.m
HackAtlTest3.m
HackAtlTest4.m
1 - subplot(2,2,1); %Location of spectrogram in overall plot
2 - x1 = audioread('Emory University 1.wav'); %Read in .wav file, store as array of points
3 - fs = 48000; %Sampling rate
4 - spectrogram(x1,[],[],[],fs,'yaxis'); %Display spectrogram
5 - title('"Pause" Trial 1'); %Title of particular subplot
6
7 %Above process repeated for 3 other audio files below
8
9 - subplot(2,2,2);
10 - x2 = audioread('Emory University 2.wav');
11 - spectrogram(x2,[],[],[],fs,'yaxis');
12 - title('"Pause" Trial 2');
13
14 - subplot(2,2,3);
15 - x3 = audioread('Emory University 3.wav');
16 - spectrogram(x3,[],[],[],fs,'yaxis');
17 - title("Play");
18
19 - subplot(2,2,4);
20 - x4 = audioread('Emory University 4.wav');
21 - spectrogram(x4,[],[],[],fs,'yaxis');
22 - title("Call");

Audio Comparison Algorithm – Raw Data



Comparison Algorithm Analysis



Finances

REVENUE

$4.80 MILLION

COSTS

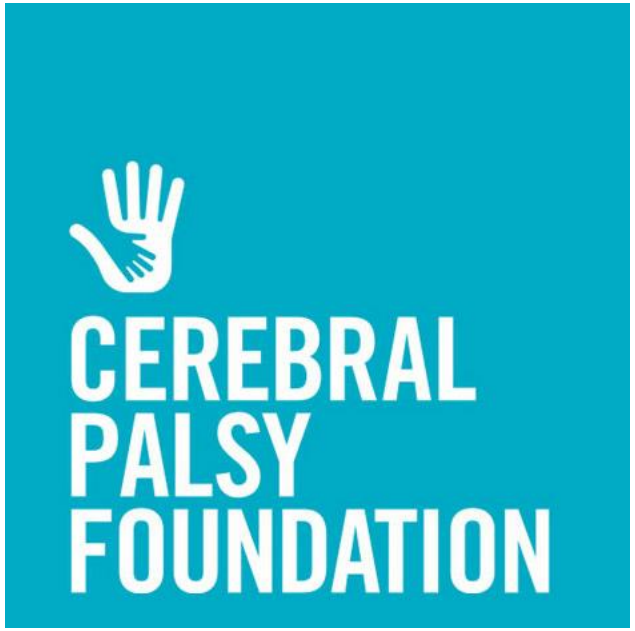
$42,260

First Year Projections

Marketing

In order to earn $4.80 million we have to market excessively before our release

To popularize our product, we have three approaches that we will take



Support Groups

Special Need Programs in Schools

Social Media Presence

Target Market Share

- After marketing, we plan to acquire a 30% market share of the total 133,000 teens affected by severe Cerebral Palsy
- Ideal Market (Total Targeted Population) = 133,000
- Realistic Market Share: 30% of 133,000 ~ 40,000

Revenue

Price of our app: $10 per month subscription fee

Market Share * Price = Revenue

40,000 * $10 = $400,000 Per Month

$4.80 Million in our first year

Estimated Costs

Mobile App Costs	
IOS & Android Platform	*$5,000*
Custom Branded UI	*$2,500*
Account Login	*$700*
Basic Security Measure	*$850*
Payment Feature	*$3,000*
Database	*$2,000*
Extra App Features	*$4,500*
App Management	*$3,710*
Total	***$22,260***

Startup Costs	
Marketing	*$6,000*
Consultation Fees	*$2,500*
Taxes	*$6,500*
Legal Costs	*$5,000*
Total	***$20,000***

First Year Total Cost - $42,260

The Team

Harish
Hustler

Lokranjan
Hustler

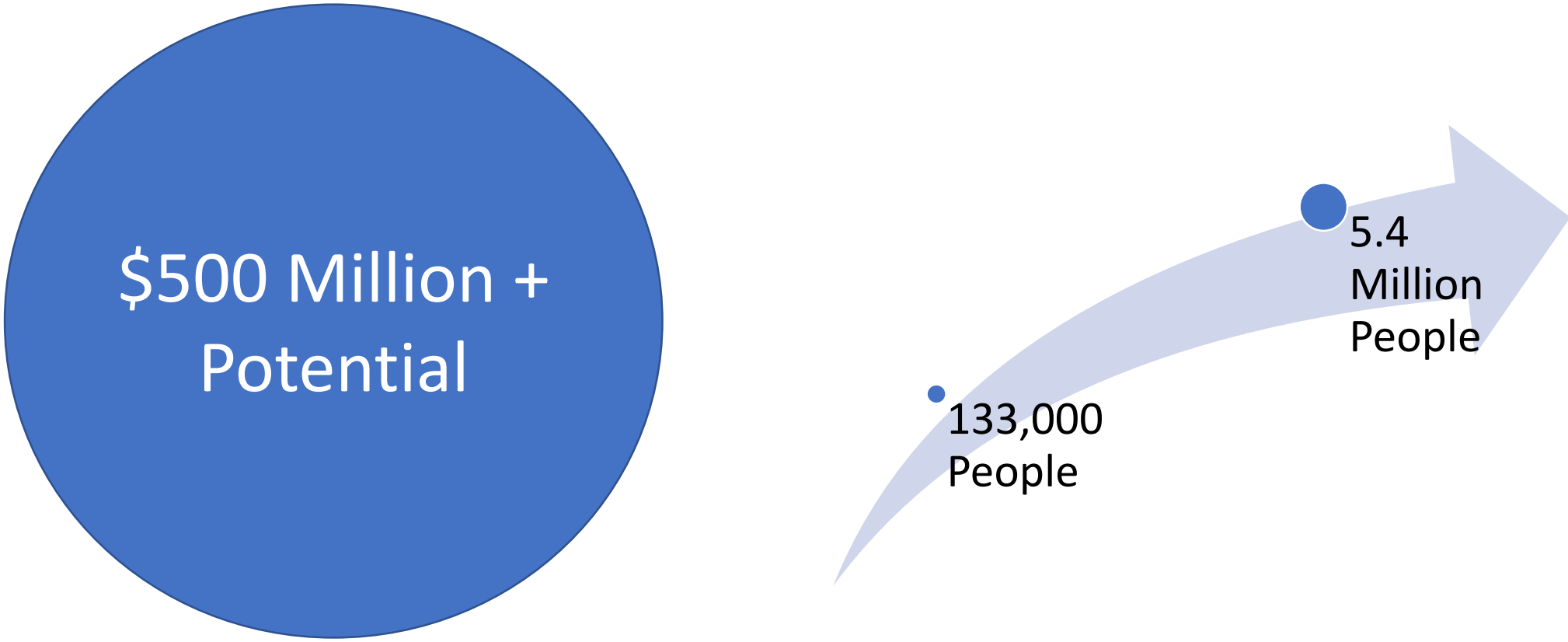
Danielle
Hacker

Arundhati
Hacker

Yuma
Hipster

Business Plan – The Next Steps

Expanding Our Market Over The Years



Profits earned over the initial years will be reinvested to expand our market and make technology fully accessible for people with physical disabilities

Sources

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- http://greateratlantaspeech.com/physical-therapy/
- https://childdevelopment.com.au/areas-of-concern/fine-motor-skills/fine-motor-skills/
- https://research.cerebralpalsy.org.au/what-is-cerebral-palsy/how-cerebral-palsy-affects-people/
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