Release Plan, LoFiAi, Team LoFiAi, Release Date: 6/07/2018, Revision 1: 6/06/2018

High Level Goals:

- Train an AI to compose music
- Have a website that constantly outputs new generated music composed by the AI

User Stories for the Release:

- Sprint 1:
  - [8] As a developer, I need to learn the relevant technologies involved with web development.
    - Study MERN stack [3+]
    - Learn HTML/CSS/Javascript [1]
    - Learn Adobe Photoshop/Illustrator for web design [2]
    - Setup development environment for the web application [4+]
    - Become familiar with AWS [2]

    Total Hours: 12

  - [8+] As a developer, I need to learn how to work with music-related artificial intelligence.
    - Test/verify Wavenet [2]
    - Learn to take advantage of Wavenet properly [5+]

    Total Hours: 7

  - [13+] As a developer, I want to train an AI to generate lo-fi hip hop, so that I can generate music from it later on.
    - Collect a sizeable amount of training data [1]
    - Set up a powerful linux virtual machine with AWS [3]
    - Give the training instruction and save the AI model produced [15+]

    Total Hours: 19

- Sprint 2:
  - [13+] As a user, I want to listen to new instrumental music, so that I don't hear the same song twice.
    - Use AI to generate music [5]
    - Back-end: Setup MongoDB to save links (ID) to music in AWS [8]
    - Setup API services to connect back-end route endpoint to front-end [8]
    - Back-end: Randomly retrieve music from database [5]

        - Store the actual music audio files in a server and connect it to mLab [5]

      Total Hours: 26

    - [8+] As a user, I want the website to have a minimalist design so that users can access the features easily.
        - Implement landing page design/skeleton using HTML/CSS [1]
        - Design landing page for the website with HTML/CSS: UI, Logo/Mascot, Backdrop [2]
        - Make navigation bar UI: Landing page link and About page link [2]
        - Use Music player plugin on front-end to make UI to play music, stop music, volume control [2]

      Total Hours: 7

- Sprint 3:
    - [3] As a user, I want to save music that I listened to so that I can listen to the music again if I liked it.
        - Implement UI to save songs [1]
        - Transfer file from AWS to user's computer [5]

      Total Hours: 6

    - [13] As a user, I want to share a track with someone else so that they may enjoy the music too.
        - Implement Social Media plugins to connect to the user's social media accounts [3]
        - Implement UI buttons to connect and share songs [2]
        - Generate/load URLs to begin at a specific track [5+]

      Total Hours: 10

    - [5] As a user, I want a parallax design, so that I can better immerse myself in the style of the website.
        - Upload Vertical parallax design template in React [1]
        - Finish up design mockup in Illustrator [2]
        - Implement design [4]

      Total Hours: 7

    - [5] As a user, I want seamless audio controls so that the controls do not disrupt my listening immersion.
        - Use JavaScript/React or plugins to implement custom audio controls [3]
            - Play
            - Volume control
        - Use CSS to style the controls to blend into the design[4]

      Total Hours: 7

- Sprint 4:
    - [2] As a user, I want to read about the product so that I know what the product is for.
        - Write the paragraph about the product [1]
        - Implement it into the page [1]

      Total Hours: 2

    - [3] As a user, I want the website to be hosted so that I can access the website.
        - Heroku hosting [3]

      Total Hours: 3

    - [5] As a user, I want to read about the AI's progress so that I can fully understand what went into this project.
        - Gather data and research [1]
        - Write about the process [1]
        - Implement it into a new page on the website [3]

      Total Hours: 5

    - [8] As a user, I want to be able to read the track name and know how far into the track I am so that I can refer to them.
        - Length of song (react/CSS) [1]
        - Title of song [2]
        - Implement through Parallax [5]

      Total Hours: 8

    - [8] As a user I want to have an sidebar that holds all the icons for social media links so that I can experience the art on the website.
        - Use react and javascript [3]

        - Button reveals icons [5]

    Total Hours: 8

Product Backlog:

- (13) As a user, I want dynamic aesthetics to the music so that the design matches the feel of the currently playing music.
    - Implement a music visualizer that listens to the current song using WebGL: 7+ hours
    - Change CSS or graphics depending on the genre of music playing: 5+ hours
    - Total for user story 12: 12+ hours

- (21+) As a user, I want music with an intro/end, chorus, and verse so that the music sounds more complete.
    - Manually listen to all music generated by the AI: 24+ (hours depend on how much music to produced)
    - Tag each segment of the music as either: Introduction/End, Chorus, or Verse: around the same as the previous task
    - Implement algorithm for the DJ (front-end) to put together a song that pulls from the three categories: 4 hours
    - Implement a rating system that gives feedback to the DJ
        - Implement UI to rate songs: 2 hours
        - Send ratings to the algorithm and have the algorithm change based on the ratings: 3 hours
    - Total for user story 13: 33+ hours

- (13+) As a user, I want user accounts so that I can have my own profile, save songs online, and share my songs among other users.
    - Save user IDs in the database: 2 hours
    - Implement encryption and authentication services: 4 hours
    - Implement UI to login, logout, and create user accounts: 2 hours
    - Implement profile pages (features not determined): 5+ hours
    - Total for user story 14: 13+ hours

- (13+) As a mobile user, I want a mobile application so that I can easily access the application and play music in the background.
    - Learn mobile technologies: 8+ hours
    - Translate web features to mobile: 7+ hours
    - Total for user story 15: 15+ hours