Release Plan, LoFiAi, Team LoFiAi, Release Date: 6/10/2018, Revision 1: 4/12/2018

High Level Goals:

- Train an AI to compose music
- Have a website that constantly outputs new generated music composed by the AI so that no song is ever heard twice

User Stories for the Release:

- Sprint 1:
    - (8) As a developer, I need to learn the relevant technologies involved with web development.
        - Learn HTML, CSS, JavaScript: 1 hour
        - Learn the MERN stack (MongoDB, Express.js, React, Node.js): 3+ hours
        - Learn Adobe Photoshop/Illustrator: 2 hours
        - Setup development environment for the web application: 4+ hours
        - Become familiar with AWS: 2 hours
        - Total for user story 1: 12+ hours
    - (8+) As a developer, I need to learn how to work with music-related artificial intelligence.
        - Test/verify Wavenet via AWS: 2 hours
        - Learn to take advantage of Wavenet properly: 5+ hours
        - Total for user story 2: 7+ hours
    - (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 hour
        - Set up a powerful linux virtual machine with AWS: 3 hours
        - Give the training instruction and save the AI model produced: 15+ hours
        - Total for user story 3: 19+ hours
- 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 the trained AI to generate and send the raw music output to the front-end: 10+ hours

        - The DJ (front-end) uses a basic algorithm to put together the raw music: 3 hours
        - Save the output to AWS by creating a link with MongoDB: 4 hours
        - Implement a React music player: 3 hours
        - Total for user story 4: 20+ hours
    - (8+) As a user, I want that website to have a minimalist design so that users can access the features easily.
        - Use Photoshop to make unobtrusive artwork and graphics: 8+ hours
        - Make easily accessible features/navigation, uncluttered and intuitive UI using HTML and CSS: 3 hours
        - Total for user story 5: 11+ hours

- Sprint 3:
    - (13) 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.
        - Save current songs to AWS and link them to MongoDB: 4 hours
        - Save visit history using React's Redux Store: 6 hours
        - Implement UI to save songs: 1 hour
        - Total for user story 6: 11 hours
    - (3) 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 hours
        - Implement UI buttons to connect and share songs: 2 hours
        - Use visit history to send current songs to social media: 2 hours
            - Depends on if the save feature is already implemented
        - Total for user story 7: 7 hours

- Sprint 4:

- (8) As a user, I want to be able to rewind the music so that I can listen to a previous track again.
  - Use the local history to play a previous song: 3 hours
  - Implement rewind feature in the music player: 3 hours
  - Implement UI to rewind song or play previous song: 2 hours
  - Total for user story 8: 8 hours
- (5) As mobile user, I want the website to be mobile-friendly so that I can access the website from anywhere.
  - Use CSS and HTML5 to set mobile-specific design: 2 hours
  - Use Bootstrap to make styles consistent and structured: 3 hours
  - Total for user story 9: 5 hours
- (8-) As a user, I want GIFs while the music is playing so that I can relax while listening to music.
  - Use JavaScript web scraping to get GIFs from desired websites: 3 hours
  - Filter obtained GIFs to show what the user desires: 3 hours
  - Incorporate filtered GIFs into the design: 1 hour
  - Total for user story 10: 7 hours
- (5+) As a user, I want the AI to be able to make music for multiple genres so that I can listen to different types of music.
  - Train multiple AIs, each one for a different genre
    - Collect training data for different genres: 2 hours
    - Give training instructions to each AI and save the AI models produced: 15+ hours
  - Implement UI to allow users to pick different genres: 2 hours

        - Retrieve songs of the picked genre from AWS and play them: 1 hour
        - Total for user story 11: 20+ hours

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