

# Spotify± Proposal

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## Overall Vision

The vision for Spotify is to make liking, disliking, storing, and exploring music on Spotify easier and more straight forward. When you like a song, simply hit a button, and it will be saved along with all of your other liked songs, much like Spotify does. The TUI will then categorize those songs into easily manageable tabs that you can play from or explore new songs that would be similar. When exploring new songs, an exploratory score can be set to tell the ML model how much you want the song selection you get to match the selection you have previously made; all of this being easily changed while listening to songs. Overall, we want to make Spotify easier to navigate, both through your saved songs and to songs you may like, and create a more tailored to explore more music you haven't heard of.

## Semester Goals

### ML

- Basic ML model
- Collect Song Features
- Rate songs as how likely a user would like them
  - Have different judgements for different user playlists

### TUI

- Interaction with Spotify API
- Play songs on TUI
- Clean and customizable design
- Exploratory meter
- Playlist creation, navigation, customization

### Spotify Plugin

- Mirror TUI's functionality, but as a Spotify Plugin

### API

- User Authentication with API
- Collect User songs programmatically
- Handle calls to API and send relevant data to TUI
- Create playlist for user based on interests

### Website

- Basic landing page to showcase project

# Milestones

## February

- Research relevant topics
  - TUI creation
  - Spotify Plugin
  - Spotify API calls
- Decide on and implement basic ML model structure
- Decide on pipeline of data (where are specific requests made and processed)
- Have basic TUI and plugin figured out

## March

- Have ML model proof of concept
- Be able to play music from the TUI and plugin
- TUI and plugin has user-friendly look and basic navigation
  - Features underway with basics finished
    - Like/Dislike should be done
    - Song history close
    - Analytic database

## April

- ML model works
  - Predicts if a song would fit a user's liked songs
  - Is able to give different recommendations based on playlist
- TUI and plugin
  - Features finished and polished
    - Like/Dislike
    - Undecided song history
    - Analytics
    - Notification prompts (?)
  - Navigation finished
  - Clean look
    - Customizable Design
- Website done