Final Project Proposal

B351/Q351

# Basic Information

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| **Project Title**  Pick-a-Tune  **Short Project Statement**  Our project is based around comparisons between different songs based on a set number of attributes and designing a machine learning algorithm to both determine similarity coefficients for two songs and recommend songs to a listener given a list of songs and artists they listen to. Quantitative and qualitative elements of each song’s audio will be measured as attributes. | **Team Members**   1. Name: Phuc Pham 2. Name: Matthew Zelenin 3. Name: Samuel Oates |

# Background

Please answer the following questions. This section should be no longer than 1 page single-spaced. (You can remove this text after):

1. Describe the problem space. What are the objectives, challenges, and constraints? What are some of the variations found in the problem space?

The problem space is the possible songs that be categories and made within the US within the last 20 years. The objectives are analyzing a user’s songs data based on genres, artists, moods, regions, and mediums and output a playlist that would match the user’s input. Challenges are that we must scrub our data to fit our credential, making decision to gain the most information out of the possible splits, and possibly create a GUI for the whole system. Some of the constraints are that

1. What are some historical attempts to tackle the problem space? Include links and references where appropriate.
2. What solution are you proposing? Are there any existing similar solutions? How will yours compare?

Include links and references where appropriate.

# Third-Party Libraries and Technologies

If you intend to use third-party tools, please explain the following:

1. What technologies will you be using?

I don’t know

1. What will they be used for / how will they assist you in your project?
2. How will you demonstrate your knowledge of the topic area despite offloading work to the third-party technology?

If you do not intend to use third-party tools, please remove this section. You may always opt to use third-party tools later by presenting the third-party tool request form to your mentors at one of your check-ins.

1

# Deliverables

In this section, please list the specific action items that you intend to be deliver by the end of the project. Be as specific as possible. You may use a bulleted format. This section should be no longer than 1 page single-spaced.

# Timeline

Please delineate the major milestones of your project (no milestone should take more than a week to accomplish). The milestones should have accompanying descriptions of everything they entail.

Then, for each milestone, specify when you will have it completed (specific date). Additionally, make it clear which milestones you will have completed by each check-in date.

# Acknowledgement

Instructor Mentor 1 Signature

Instructor Mentor 2 Signature

Team Member 1 Signature

Team Member 2 Signature

Team Member 3 Signature

2