# Software Requirements Specification for Software Engineering: subtitle describing software

 $Team\ 8-Rhythm\ Rangers$ 

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# **Revision History**

Date	Version	Notes
Date 1	1.0	Notes
Date 2	1.1	Notes

# 1 Purpose of the Project

#### 1.1 User Business

Insert your content here.

#### 1.2 Goals of the Project

Insert your content here.

#### 2 Stakeholders

## 2.1 Client

Insert your content here.

#### 2.2 Customer

Insert your content here.

#### 2.3 Other Stakeholders

Insert your content here.

# 2.4 Hands-On Users of the Project

Insert your content here.

#### 2.5 Personas

Insert your content here.

# 2.6 Priorities Assigned to Users

#### 2.7 User Participation

Insert your content here.

#### 2.8 Maintenance Users and Service Technicians

Insert your content here.

#### 3 Mandated Constraints

#### 3.1 Solution Constraints

Insert your content here.

# 3.2 Implementation Environment of the Current System

Insert your content here.

# 3.3 Partner or Collaborative Applications

Insert your content here.

#### 3.4 Off-the-Shelf Software

Insert your content here.

# 3.5 Anticipated Workplace Environment

Insert your content here.

#### 3.6 Schedule Constraints

Insert your content here.

### 3.7 Budget Constraints

#### 3.8 Enterprise Constraints

Insert your content here.

# 4 Naming Conventions and Terminology

# 4.1 Glossary of All Terms, Including Acronyms, Used by Stakeholders involved in the Project

Insert your content here.

# 5 Relevant Facts And Assumptions

#### 5.1 Relevant Facts

- Existing music recommendation algorithms are limited in customization and accuracy
- Current generative models struggle to match the quality of humanproduced music
- The output of current generative models is unpredicable
- Existing audio analysis tools provide a strong foundation that can be expanded upon
- The system will rely on external APIs to gather data on musical features

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#### 5.2 Business Rules

Not Applicable

# 5.3 Assumptions

- Users will have at least some familiarity of music theory
- The analysis and recommendation systems will use as many well-established musical features as possible

- All API inputs will be easily accessible and reliable enough to support the recommendation and analysis systems
- The system will be written in a language that all developers are familiar with
- The system will use a local server to handle the processing of the machine learning model and large datasets
- Handling of niche features and cover art are designed to enhance the user experience, but these will not be a part of the core functionality of the system
- The generative system will be completed by the POC demo date
- The recommendation and analysis systems will be completed by the Revision 0 date

# 6 The Scope of the Work

#### 6.1 The Current Situation

Insert your content here.

#### 6.2 The Context of the Work

Insert your content here.

## 6.3 Work Partitioning

Insert your content here.

# 6.4 Specifying a Business Use Case (BUC)

# 7 Business Data Model and Data Dictionary

#### 7.1 Business Data Model

Insert your content here.

#### 7.2 Data Dictionary

Insert your content here.

# 8 The Scope of the Product

## 8.1 Product Boundary

Insert your content here.

#### 8.2 Product Use Case Table

Insert your content here.

# 8.3 Individual Product Use Cases (PUC's)

Insert your content here.

# 9 Functional Requirements

## 9.1 Functional Requirements

Insert your content here.

# 10 Look and Feel Requirements

# 10.1 Appearance Requirements

#### 10.2 Style Requirements

Insert your content here.

# 11 Usability and Humanity Requirements

#### 11.1 Ease of Use Requirements

Insert your content here.

# 11.2 Personalization and Internationalization Requirements

Insert your content here.

#### 11.3 Learning Requirements

Insert your content here.

#### 11.4 Understandability and Politeness Requirements

Insert your content here.

# 11.5 Accessibility Requirements

Insert your content here.

# 12 Performance Requirements

# 12.1 Speed and Latency Requirements

Insert your content here.

# 12.2 Safety-Critical Requirements

## 12.3 Precision or Accuracy Requirements

Insert your content here.

#### 12.4 Robustness or Fault-Tolerance Requirements

Insert your content here.

#### 12.5 Capacity Requirements

Insert your content here.

#### 12.6 Scalability or Extensibility Requirements

Insert your content here.

#### 12.7 Longevity Requirements

Insert your content here.

# 13 Operational and Environmental Requirements

### 13.1 Expected Physical Environment

Insert your content here.

# 13.2 Wider Environment Requirements

Insert your content here.

# 13.3 Requirements for Interfacing with Adjacent Systems

#### 13.4 Productization Requirements

Insert your content here.

### 13.5 Release Requirements

Insert your content here.

# 14 Maintainability and Support Requirements

#### 14.1 Maintenance Requirements

Insert your content here.

#### 14.2 Supportability Requirements

Insert your content here.

#### 14.3 Adaptability Requirements

Insert your content here.

# 15 Security Requirements

# 15.1 Access Requirements

Insert your content here.

# 15.2 Integrity Requirements

Insert your content here.

# 15.3 Privacy Requirements

#### 15.4 Audit Requirements

Insert your content here.

## 15.5 Immunity Requirements

Insert your content here.

# 16 Cultural Requirements

#### 16.1 Cultural Requirements

Insert your content here.

# 17 Compliance Requirements

# 17.1 Legal Requirements

Insert your content here.

### 17.2 Standards Compliance Requirements

Insert your content here.

# 18 Open Issues

Insert your content here.

# 19 Off-the-Shelf Solutions

# 19.1 Ready-Made Products

Insert your content here.

# 19.2 Reusable Components

#### 19.3 Products That Can Be Copied

Insert your content here.

#### 20 New Problems

#### 20.1 Effects on the Current Environment

Insert your content here.

#### 20.2 Effects on the Installed Systems

Insert your content here.

#### 20.3 Potential User Problems

Insert your content here.

# 20.4 Limitations in the Anticipated Implementation Environment That May Inhibit the New Product

Insert your content here.

# 20.5 Follow-Up Problems

Insert your content here.

#### 21 Tasks

# 21.1 Project Planning

Insert your content here.

# 21.2 Planning of the Development Phases

# 22 Migration to the New Product

## 22.1 Requirements for Migration to the New Product

There are no migration requirements as this project is not a replacement or upgrade of a previous project

# 22.2 Data That Has to be Modified or Translated for the New System

Similarly, there currently is no data that needs to be modified

#### 23 Costs

Insert your content here.

# 24 User Documentation and Training

#### 24.1 User Documentation Requirements

Insert your content here.

# 24.2 Training Requirements

Insert your content here.

# 25 Waiting Room

Insert your content here.

## 26 Ideas for Solution

# Appendix — Reflection

The information in this section will be used to evaluate the team members on the graduate attribute of Lifelong Learning. Please answer the following questions:

- 1. What knowledge and skills will the team collectively need to acquire to successfully complete this capstone project? Examples of possible knowledge to acquire include domain specific knowledge from the domain of your application, or software engineering knowledge, mechatronics knowledge or computer science knowledge. Skills may be related to technology, or writing, or presentation, or team management, etc. You should look to identify at least one item for each team member.
- 2. For each of the knowledge areas and skills identified in the previous question, what are at least two approaches to acquiring the knowledge or mastering the skill? Of the identified approaches, which will each team member pursue, and why did they make this choice?