

GAYATRI VIDYA PARISHAD
COLLEGE FOR DEGREE AND PG COURSES (A)
(Affiliated to Andhra University)
Rushikonda, Visakhapatnam
Department of Computer Applications



VISION

“Creating human excellence for a better society”

MISSION

“Unfold into a world class organization with strong academic and research base, producing responsible citizens to cater to the changing needs of the society.”

MUSIC AND GAME RECOMMENDATION
BASED ON EMOTION IN VOICE

A project report submitted in partial fulfilment of
the requirements for the award of the Degree of
Master of Computer Applications

Submitted by

K. Manoj Krishna

(Regd. No: PG222302032)

Under the Guidance of

Sri A. V. Prabhakar

Assistant Professor



Department of Computer Applications

GAYATRI VIDYA PARISHAD

COLLEGE FOR DEGREE AND PG COURSES(A)

(Affiliated to Andhra University)

Rushikonda, Visakhapatnam.

2022-2024

GAYATRI VIDYA PARISHAD
COLLEGE FOR DEGREE AND PG COURSES (A)

(Affiliated to Andhra University)

Rushikonda, Visakhapatnam

Department of Computer Applications



CERTIFICATE

This is to certify that the project report titled “**MUSIC AND GAME RECOMMENDATION BASED ON EMOTION IN VOICE**” is the bonafide record of project work carried out by **Mr. K. Manoj Krishna** (Regd. No. PG-222302032) as a student of this college, during the academic year 2022-2024, in partial fulfillment of the requirement for the award of the degree of Master of Computer Applications.

Project Guide
Sri A. V. Prabhakar

Director of M.C.A
Prof. I. S. Pallavi

External Examiner

DECLARATION

I, Mr. K. Manoj Krishna hereby declares that the project report titled **“MUSIC AND GAME RECOMMENDATION BASED ON EMOTION IN VOICE”**, is an original work done at **Gayatri Vidya Parishad College for Degree and PG Courses (Autonomous), Visakhapatnam**, submitted in partial fulfillment of the requirements for the award of Master of Computer Science, Gayatri Vidya Parishad College for Degree and PG Courses (A), affiliated to Andhra University. I assure that this project is not submitted in any other University or college.

K. MANOJ KRISHNA

(PG222302032)

ACKNOWLEDGMENT

I consider it as a privilege to thank all those who helped me a lot for successful completion of the project **“MUSIC AND GAME RECOMMENDATION BASED ON EMOTION IN VOICE”**.

I would like to thank **Prof. K.S,Bose, I/C Principal of Gayatri Vidya Parishad College for Degree and PG Courses(Autonomous)** who has provided full-fledged lab and infrastructure for successful completion of my project.

I would like to thank **Prof. I. S. Pallavi, Director of MCA**, who has obliged in responding to every request though she is busy with her hectic schedule of administration and teaching and suggested me with several changes a lot in completion of this project.

I would like to thank our ever-accommodating my project guide **Sri A.V. Prabhakar, Assistant Professor**, Department of Computer Applications,who has been very obliged in responding to every request though he is busy with his hectic schedule of teaching.

I thank all the **Teaching and Non-teaching staff** who has been aconstant source of support and encouragement during the study tenure.

(K. MANOJ KRISHNA)

CONTENTS

1. INTRODUCTION	1
1.1 Introduction to Machine Learning	1-2
1.2 Categories of Machine Learning	2-3
1.3 Need for Machine Learning	3
1.4 Focuses in Machine Learning	3-4
1.5 Applications of Machine Learning	4
1.6 Machine Learning Techniques	4-6
1.7 Future Directions	6-8
1.8 Challenges & Limitations of Machine Learning	8-9
2. LITERATURE SURVEY	
2.1 Introduction	10
2.2 Existing System	10
2.3 Problem Statement	11
2.4 Proposed System	11
2.5 Objectives	11
2.6 About Python	12
2.6.1 Advantages of Python	12
2.6.2 Characteristics of Python	12
2.6.3 New Approach for Building Software	12-13
2.6.4 Applications of Python	13
2.6.5 Python – GUI(programming)	13
2.6.6 Python Libraries	14
2.6.7 Tkinter Programming	14
2.6.8 Tkinter Widgets	14-15
2.7 Functional Requirements	15-16
2.8 Non-Functional Requirements	16-17

3. UML MODELING	
3.1 Introduction to UML	18
3.2 Goals of UML	18
3.3 UML Standard Diagrams	18-19
3.3.1 Structural Diagrams	19
3.3.2 Behavioral Diagrams	19
3.4 UML Diagrams	
3.4.1 Introduction to Use Case Diagram	19
3.4.1.1 Actors	20
3.4.1.2 Use Cases	20-26
3.4.2 Sequence Diagram	27-28
3.4.3 Activity Diagram	28-30
4. DESIGN	31
4.1 Design Goals	31
4.2 System Architecture	31
4.3 System Design	32
4.4 Implementation of Project	32-33
4.5 Algorithms	34
5. CODING	
5.1 Coding Approach	35
5.2 Verification and Validation	35-36
5.3 Source Code	36-52
6. TESTING	53
6.1 Testing Activities	53
6.2 Testing Types	53-56
6.3 Test Plan	56
6.4 Test Cases	57-58
7. SCREENS	59-65
8. CONCLUSION	66
9. FUTURE SCOPE	67

10. REFERENCES

10.1 Academic Papers and Journals **68**

10.2 Web References **68**

11. APPENDIX

11.1 List of Tables **69**

11.2 List of Figures **70**

ABSTRACT

Emotion plays a crucial role in human communication, significantly impacting our interactions and decision-making processes. This project explores the innovative integration of Speech Emotion Recognition (SER) technology with personalized entertainment recommendations. By analyzing vocal inputs, the system identifies the speaker's emotional state using advanced machine learning algorithms. Once the emotion is detected, the system recommends tailored music playlists and games that align with the user's current mood. This fusion of SER with personalized entertainment aims to enhance user experiences by providing emotionally congruent content, fostering emotional well-being, and potentially offering therapeutic benefits. Our approach leverages a robust dataset for training the SER model and employs collaborative filtering techniques for recommendation, ensuring relevance and personalization. This project not only showcases the potential of emotion-aware technologies but also paves the way for more empathetic and responsive digital environments. By extracting and classifying audio features, the system identifies emotions such as happiness, sadness, anger, fear, and neutrality. This project combines audio preprocessing, feature extraction, deep learning models, and adaptive algorithms to create a robust and responsive user experience. The applications of this technology are diverse, ranging from entertainment and gaming to emotional well-being support, showcasing the transformative potential of AI and ML in understanding and responding to human emotions. Moreover, this system can be integrated into various platforms, from mobile apps to virtual assistants, further expanding its usability. Future developments could explore real-time emotion recognition and multi-modal inputs, incorporating facial expressions and body language to enhance accuracy and personalization even further.

INTRODUCTION

ABSTRACT

LITERATURE SURVEY

UML MODELING

DESIGN

CODING

TESTING

SCREENS

CONCLUSION

FUTURE SCOPE

REFERENCES

APPENDIX