



# Virtual Musical Performance In Pandemic Situation

**H. A. M. Prasadinie**  
(Reg. No.: MS20907884)  
M.Sc. in IT  
Specialized in EAD

Supervisor: Mr. Dilshan De Silva

November 2021

**Department of Information Technology  
Faculty of Graduate Studies And Research  
Sri Lanka Institute of Information Technology**

## Declaration

I declare that this is my own work and this dissertation does not incorporate without acknowledgement any material previously submitted for a Degree or Diploma in any other University or institute of higher learning and to the best of my knowledge and belief it does not contain any material previously published or written by another person except where the acknowledgement is made in the text.

Also, I hereby grant to Sri Lanka Institute of Information Technology, the nonexclusive right to reproduce and distribute the dissertation, in whole or in part in print, electronic or other medium. I retain the right to use this content in whole or part in future works (such as articles or books).

Name: H. A. M. Prasadinie

Registration No.: MS20907884

The above candidate has carried out research for the master's degree Dissertation under my supervision.

Supervisor: Mr. Dilshan De Silva

Signature of the supervisor:

Date: 06-11-2021

## Abstract

The 2020 Covid – 19 global epidemics had a significant impact to the entertainment industry. That's greatly affected societies around the world. And also due to government policies citizens are unable to participate for public gatherings, public businesses and public areas. In music industry, major part of income of musicians depends on tours, musical show. But in this pandemic situation, had a huge negative effect to the musicians' income because they cannot perform face-to-face and cannot arrange huge gatherings.

However, nowadays musicians have to turn to digital media and pushed music industry to the new reality of online concerts-virtual concerts. So, musicians are taking the show/concert online. Musicians should send links for the virtual concerts individually. Apart from that, the research proposes to implement an application to put all the details of the concerts. And through the application people can pay and get the link easily. If needed people can participate to the concert through the application and requesting songs from the band by commenting and can see the views for the performance. Advertisers can show their advertisements while performance going on.

## Acknowledgement

The work described in this research thesis was carried out as my final year research project for the module Research Project. The completed final project is the result of combining all the hard work of me and the encouragement, support and guidance given by many others. Therefore, it is my duty to express my gratitude to all who gave me the support to complete this major task.

I am deeply indebted to my supervisor Mr. Dilshan De Silva, Senior Lecturer of Sri Lanka Institute of Information Technology whose suggestions, constant encouragement and support in the development of this research, particularly for the many stimulating and instructive discussions.

I am also wish to thank all my colleagues and friends for all their help, support, interest and valuable advices. Finally, I would like to thank all others whose names are not listed particularly but have given their support in many ways and encouraged me to make this a success.

## Table of Contents

Declaration.....	ii
Abstract.....	iii
Acknowledgement .....	iv
List of Figures .....	7
List of Tables .....	9
Chapter 1 Introduction .....	10
1.1 Context and Background.....	10
1.2 Problem Statement (Definition).....	11
1.3 Research Objectives and Research Questions .....	11
1.3.1 Research Objectives.....	11
1.3.2 Research Questions.....	12
1.4 Literature Survey.....	12
1.4.1 Research Papers.....	12
1.4.2 Existing Systems .....	17
1.4.3 Google form questions.....	21
Chapter 2 Methodology.....	28
2.1 System Overview.....	28
2.2 Machine Learning Model .....	33
2.3 Data Collection.....	34
2.4 Tools and Technologies.....	35
2.5 Commercialization Aspect of Product.....	36
2.6 Testing and Implementation.....	37
2.6.1 Testing.....	37
2.6.2 Implementation .....	38
Chapter 3 Results and Discussion .....	39
3.1 Results.....	39
3.2 Discussion.....	60
Chapter 4 Conclusion .....	61
Reference.....	62
Appendix .....	63
Appendix 1: Google form 2 => Question 1.....	63
Appendix 2: Google form 2 => Question 2.....	63
Appendix 3: Google form 2 => Question 3.....	64

Appendix 4: Google form 2 => Question 4.....	64
Appendix 5: Google form 2 => Question 5.....	65
Appendix 6: Google form 2 => Question 1 Sample Response .....	65
Appendix 7: Google form 2 => Question 2 Sample Response .....	66
Appendix 8: Google form 2 => Question 3 Sample Response .....	67
Appendix 9: Google form 2 => Question 4 Sample Response .....	68
Appendix 10: Google form 2 => Question 5 Sample Response .....	69

## List of Figures

Figure 1 BandLab Logo .....	17
Figure 2 Soundtrap Logo .....	17
Figure 3 Kompoz Logo.....	18
Figure 4 Endless Logo.....	18
Figure 5 Veeps Logo .....	19
Figure 6 Youtube Logo .....	19
Figure 7 Facebook Live Streaming .....	19
Figure 8 Instagram Logo.....	19
Figure 9 Twitch Logo .....	20
Figure 10 Zoom Logo.....	20
Figure 11 Google Meets (Hangouts) .....	20
Figure 12 Periscope.....	20
Figure 13 Google form question 01 .....	21
Figure 14 Google form question 02 .....	21
Figure 15 Google form question 03 .....	22
Figure 16 Google form question 04 .....	22
Figure 17 Google form question 05 .....	23
Figure 18 Google form question 06 .....	24
Figure 19 Google form question 07 .....	24
Figure 20 Google form question 08 .....	25
Figure 21 Google form question 09 .....	26
Figure 22 Google form question 10 .....	26
Figure 23 System Overview.....	28
Figure 24 Administration Function .....	32
Figure 25 Sample Linear Regression Matrix.....	32
Figure 26 Bayesian Linear Regression Equation .....	33
Figure 27 Market Segment .....	36
Figure 28 M2H Training Experiment with Bayesian Linear Regression Algorithm .....	39
Figure 29 Evaluation Results .....	40
Figure 30 Accuracy – 93% .....	40
Figure 31 M2H Predictive Experiment with Bayesian Linear Regression Algorithm .....	41
Figure 32 Testing Prediction .....	42
Figure 33 Test Result.....	42
Figure 34 Sign In Page .....	43
Figure 35 Home Page (Events) .....	44
Figure 36 Home page (Artists) .....	45
Figure 37 Home page (Tickets) .....	46
Figure 38 Single Event Page for Fans .....	47
Figure 39 Checkout page for fans .....	48
Figure 40 Single Artist page for fans .....	49
Figure 41 Single Event page for Artist.....	50
Figure 42 Single ticket page for artist .....	51
Figure 43 Artist Account page.....	52
Figure 44 Fan Account page.....	53
Figure 45 Fan Account page Edit mode .....	54

Figure 46 Advertiser Account page.....	55
Figure 47 User Preference charts .....	56
Figure 48 Mobile Application Home page .....	57
Figure 49 Mobile Application Navigation .....	58
Figure 50 Mobile Application Profile Editing .....	59



## List of Tables

Table 1 Facilities required ..... 60