

Problem Chosen

A

**2022
MCM/ICM
Summary Sheet**

Team Control Number

XJ162

test

Summary

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1 Introduction

1.1 Problem Restatement

1.2 Overview of Our Work

2 Assumptions and Justifications

3 Notations

Table 3.1: Notation Descriptions

Symbol	Definition
\mathbf{A}	A set of artists given in dataset
\mathbf{G}	A set of genres provided in dataset
f_i	The total number of followers of artist i , $i \in \mathbf{A}$
g_{ij}	Genre tag between artist i and his or her follower j , $i, j \in \mathbf{A}$
DAS_i	Artist i 's decade of active start, accurate to 10 years
r_{ij}	Respective Influence of influencer i over follower j , $i, j \in \mathbf{A}$
w_i	Artist i 's weight of normalized indexes
TI_i	Artist i 's Total Influence
wf_j	The parameter of follower j ' influence, $j \in \mathbf{A}$
wt_i	The weight of artist i 's Total Influence, $i, j \in \mathbf{A}$
cg_{ik}	Artist i 's Contemporary Influence in certain genre, $i \in \mathbf{A}, k \in \mathbf{G}$
c_i	Artist i 's Contemporary Influence, $i \in \mathbf{A}$
S_{ij}	Similarity between artists i and j

4 Model I:Directed Network of Musical Influence Model

5 Sensitivity Test

6 Evaluation of Model

7 Conclusions

REPORT

To: ICM society

From: ICM Team 2104997

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References

- [1] C. E. Shannon. A Mathematical Theory of Communication. 1948, 27(4):623-656.

Appendices

Input matlab source: