Music Recommendation Agent

using Fuzzy JESS

Abstract:

Mu Zik is a music recommendation agent built using Fuzzy JESS. This agent suggests the user various songs and artists based on the users’ interests. It is an application of AI which uses fuzzy logic system to suggest new and popular songs for the user.

The agent makes a decision based on the input given by the user. The input value taken by the agent is usually a range of number unlike the rule-based logic system which takes in only binary values. Here, the agent gives an option for the user to select his level of interest in each genre. It also allows the user to pick a decade according to his choice.

Based on the level of interest of the user in each genre and time frame, the agent decides and suggests a song which has the perfect combination of all the genres that the user likes.

Features:

* The music recommendation agent takes in the necessary inputs from the user and based on the fuzzy logic calculations, makes a decision and suggests different songs with the right mix of each genre.
* The agent considers two different features to make the decision, namely:
  + Genre
    - Hip-Hop
    - Rap
    - Metal
    - Classical
  + Decade
* The above input features given by the user is fuzzified by the agent to recommend new music for the user from the preferred decade and genre along with the artist’s name.

Instructions to run:

* Extract the project zip file and load the project onto Eclipse
* Load fuzzyJ-2.0 file in your java reference library in eclipse. It contains the JAR file for fuzzy extension
* In the run configurations of the file, change “jess.Main” to “nrc.fuzzy.jess.FuzzyMain”
* Run the FuzzyMuZik.clp file

Sample Runs:



Figure 1: Sample Run 1



Figure 2: Sample Run 2

Test Cases:

Test 1:

Name: abc

Decade: 00s

Metal: high

Hip-Hop: high

Rap: high

Classical: high

Test 2:

Name: xyz

Decade: latest

Metal: high

Hip-Hop: low

Rap: high

Classical: low

Test 3:

Name: lmn

Decade: 90s

Metal: low

Hip-Hop: high

Rap: low

Classical: low