# Capstone Project
# - Senmus

**Ai based Music Recommendation System and User's Music Sentiment Analyzer**

Web-based music streaming service with objective to provide opportunities to discover new music, whether in the form of specific pieces of music the user hadn’t heard before or in the form of musical artists to which the user hasn’t previously been exposed.

**Problem statement: Devise a method of recommending a song to the user than dynamically updating the recommendations based on user's sentiments as feedback towards the recommendations.**

# Integrating Recommendation

**collaborative Filtering**

**Content based filtering**

**Attention based suggestion**

**The purpose of this project will be to implement a multi-faceted approach through the use of a user-based collaborative filtering algorithm, similarity matrices,  Attention based suggestion using sentiment analysis, content-based filtering, and an interactive application interface. The goal of the project will be to gain experience in the implementation of a variety of recommendation algorithms.**

# Including Sentiment analysis and feedback approach

**Sentiment analysis on User Feedback**

An engine to recommend contents in accordance with human emotions, which are expressed through Feedback of the user in the form of likes, personal playlist, choices and attention

**Classifying feedback**

A metric to classify a user response as positive, neutral or negative as well as a sentiment intensity metric to classify sentiment variations in accordance with the user's profile.

**Dashboard to maintain User profile**

Elaborate and maintain record on what the user provides as reviews and update users playlist dynamically

An envisioned application will allow a prospective user to do each of the following:

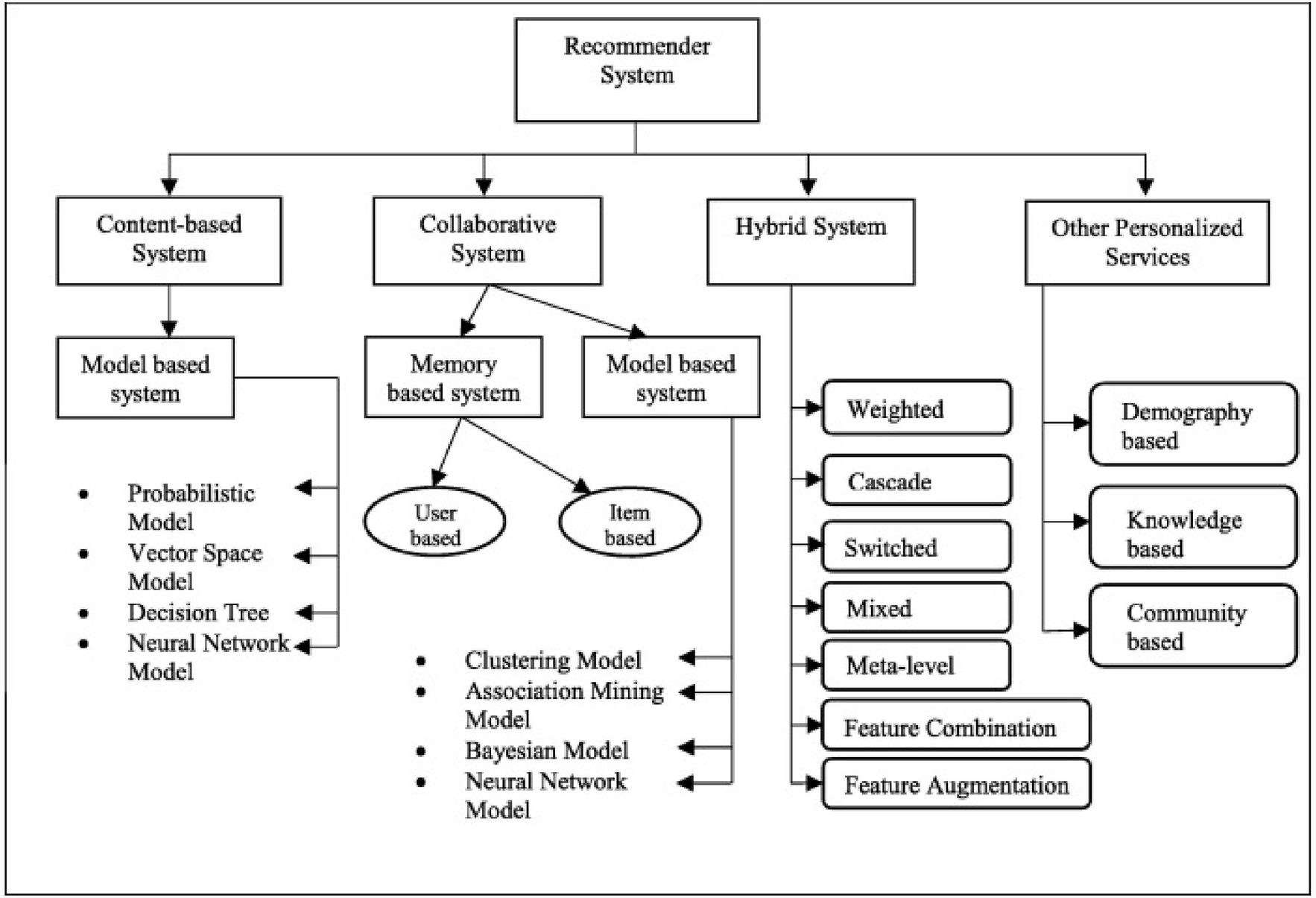
>>Review the list of artists to which they've previously listened;

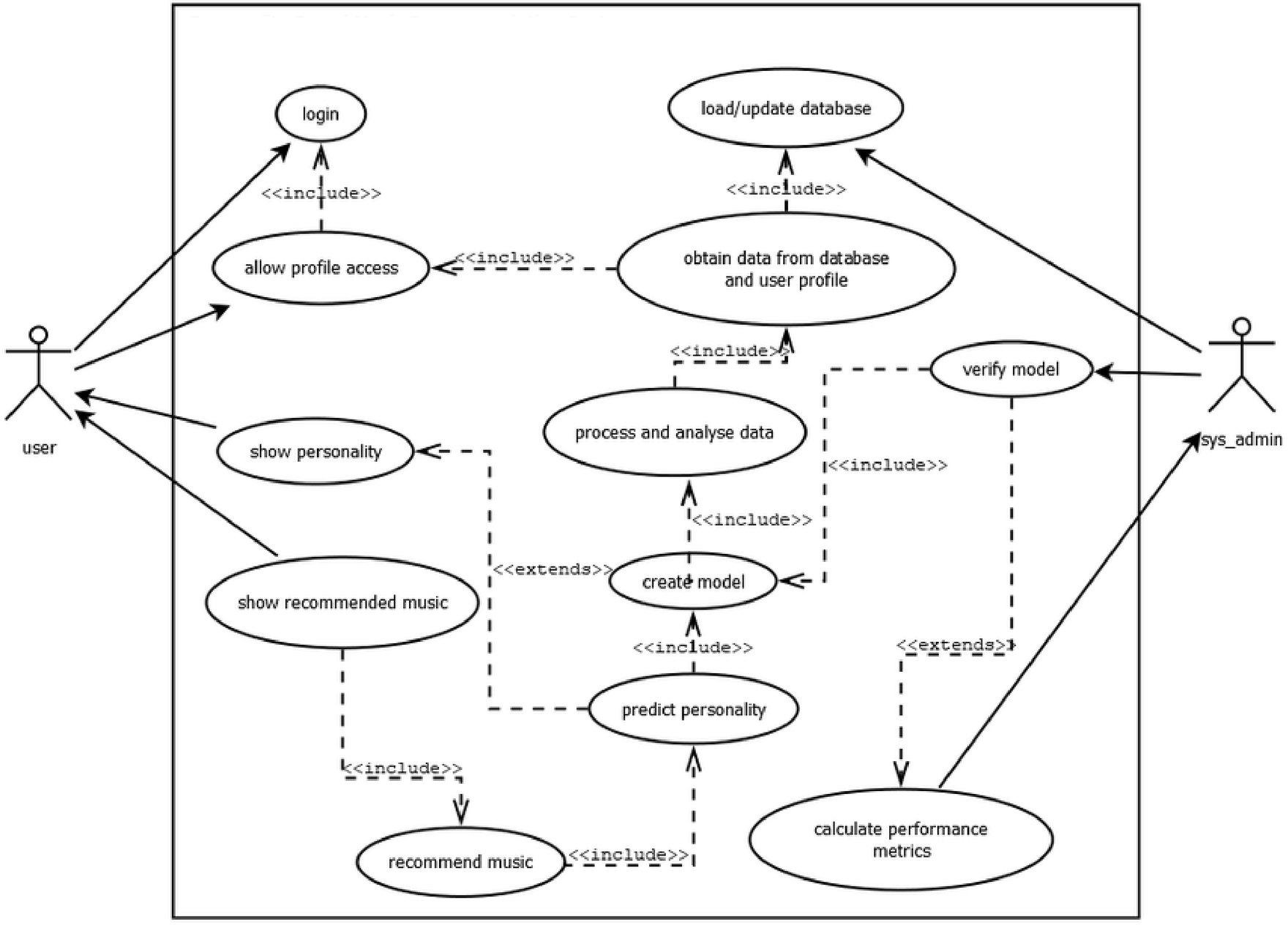
>>View the "Top 10" music recommendations generated by the user-based collaborative filtering recommender sytem

>>Receive a "Top 5" list of suggested of songs which are likely similar to whats specified/selected by the user

>>Receive a "Top 5" list of suggested songs for a user-selected musical genre.

>>For any songs listed in the results of items 1, 2, 3, or 4 (above), the user will be able to simply select the song's name and click an icon to activate item 3, thereby generating a new "Top N" list of suggested musical artists who are likely similar to the selected song's artist.


Recommender System
Content-based System
Collaborative System
Hybrid System
Other Personalized Services
Model based system
Memory based system
Model based system
Probabilistic Model
Vector Space Model
Decision Tree
Neural Network Model
User based
Item based
Clustering Model
Association Mining Model
Bayesian Model
Neural Network Model
Weighted
Cascade
Switched
Mixed
Meta-level
Feature Combination
Feature Augmentation
Demography based
Knowledge based
Community based


login
load/update database
<<include>>
<<include>>
allow profile access
<<include>>
obtain data from database
and user profile
<<include>>
verify model
user
process and analyse data
sys_admin
show personality
<<include>>
<<include>>
<<extends>>
create model
show recommended music
<<include>>
<<extends>>
predict personality
<<include>>
calculate performance
metrics
recommend music
<<include>>

# COMBINING THE DATA

WE ENVISION COMBINING THE DATA CONTAINED WITHIN VARIOUS SOURCES ONLINE IN DIFFERENT WAYS TO ENABLE OUR PROPOSED APPLICATION