UOW MALAYSIA KDU
PART OF THE UNIVERSITY OF WOLLONGONG AUSTRALIA GLOBAL NETWORK

SCHOOL OF COMPUTING & CREATIVE MEDIA

Please tick ✓

☐ FOUNDATION ☐ DIPLOMA ☐ DEGREE ☐ MASTER

Coursework Progression for Group Work

Please complete all details required clearly. The progression form is meant for coursework based subjects. The form is to be used weekly during class consultation hours by students and lecturers to track the progress of work done and expectations for the following meeting.

Course Details:

Subject Code: *(e.g. GCAS100)* **XBDS 2034 N**	**Subject Name** *(e.g. Fundamentals of Computing)*: **Data Science Toolbox**
Course Title *(e.g. Bachelor in Computing)* : Bachelor of Science in Computer Science	

Week: ***(Please*** *✓ and write the actual date**)***

Wk 1	Wk 2	Wk 3	Wk 4	Wk 5	Wk 6	Wk 7	Wk 8	Wk 9	Wk 10	Wk 11	Wk12
						✓					

Progress:

Team Work Progress: *(\Work progress shown in class OR outside class hours)*

- We started by connecting to the Spotify API using the spotipy library and obtaining an access token.
- We then extracted all of the user's liked tracks using the current_user_saved_tracks method and stored the relevant information (track name, artist name, album name, release date, length, popularity, and track ID) in a list called tracks_data.
- We used the track IDs to obtain the audio features for each track using the audio_features method and added these features to the tracks_data list.
- We converted the tracks_data list into a Pandas dataframe called liked_songs.
- We preprocessed the data by converting the release date to just the year and normalizing the audio features using the MinMaxScaler from sklearn.preprocessing.
- We performed K-means clustering with 10 clusters on the normalized audio features and added the cluster labels to the liked_songs dataframe.
- Finally, we normalized the cluster labels to values between 0 and 1 using the normalize_column function.

Next Milestone/s*: (What is expected of each team member) –* ***Can be filled by <u>Team Leader.</u>***

Task: **Feature Engineering:** Include user behaviour data in our analysis to gain insights into our own listening habits.	**Task:** explore more advanced techniques for feature engineering, such as dimensionality reduction, feature selection, or feature extraction.	**Task:**	**Task:**	**Task:**
Student #1 Name: Wan Mohammed Adam **Student No:** 0132601 **Signature:** **Date:**11/03/2023	**Student #2 Name:** Hew Yung Fung **Student No:** 0132646 **Signature:** HYF **Date:** 10/03/2022	**Student #3 Name:** **Student No:** **Signature:** **Date:**	**Student #4 Name:** **Student No:** **Signature:** **Date:**	**Student #5 Name:** **Student No:** **Signature:** **Date:**
Lecturer/s Acknowledgement and Date:				

***** *The form is NOT valid without the lecturer signature. It must be dated and signed.*