



Assignment 1 - Phase 3 - Nishant Balasubramaniam C49

💡 Product Chosen: YouTube Music

💡 P0: Gym goers who work out at least 15 days per month struggle to receive workout-context relevant music recommendations, causing frequent song skipping and manual playlist switching, leading to reduced listening session duration!

▼ Step 1: Brainstorm Solutions (Diverge)

My approach is to break the problem into smaller WHY's and then to think of solutions for each WHY.

▼ The Why's

1. The app lacks contextual awareness
 - a. The app does not know when a user is starting a workout
 - b. The app does not know what kind of workout the user is doing
 - c. The app does not know what is the current intensity of the user's workout
 - d. The app does not know what is the current mood of the user or what they are looking for
 - e. The app does not know if the user is receptive for new music or not
2. The app does not know what kind of songs the user plays during workouts or if the song choice changes with the kind of workout the user is doing
3. The app plays a bad song mid workout

4. The app plays wrong/different genre in between good songs
5. Not everyone associates fast tempo or high octane songs to workout music, for some it is motivational songs, for others it can be another genre so generalising can go wrong (Clearly seen in interview and survey responses)
6. There is no feedback mechanism for the app to know post workout if the songs played were good or not in order to continually improve

▼ The possible Solutions

1. Either we can track daily habits to automatically know (chances of error which can be minimised if uses a smart watch to track workouts) or prompt them to let us know if they are going to start working out
2. Have a small questionnaire before starting the workout
3. If the user uses a smart watch that tracks heart rate, then based on that we can understand the intensity
4. If the app knows when the user is working out, then a strong feedback mechanism can help understand the user's trends
5. Creating a workout playlist from songs that are already in their saved playlists automatically
6. Having similar playlists recommendations to existing playlists (already there)
7. Having the feeling lucky button filtered by mood
8. Identify when the user is in the gym, or what kind of workout he is doing to automatically suggest playlists
9. "Last time when you did leg workout", you started your workout with "this music", and then auto play similar vibes from there
10. Identify songs played on loop during past workout sessions to create their personalised workout
11. Track how often they skip or complete a song to understand user likes for better personalisation (Some songs initially might be in loop so suggest then, but over time if getting skipped often then take that as a trigger)
12. Allow prompt based playlist creation for users to exactly share what they are looking and these become temporary playlists so that it does not clutter the library unless explicitly saved
13. For autoplay suggestions, have a slider for user to input how much to look for new songs vs how much to look for familiar songs

Solution	Short Description	Key Assumption	Category
Dedicated Workout Mode	A dedicated workout mode that detects when a workout starts (via smartwatch/location/manual trigger), captures quick pre-workout intent (mood/intensity), and continuously improves recommendations using skip behavior + post-workout feedback.	Context-aware recommendations at workout start + continuous learning will significantly reduce skips and increase workout session duration.	High confidence
Personalised Workout Playlist Generator	Automatically generate a workout playlist using songs the user already plays frequently during past workouts or has saved.	Familiar songs reduce risk of "bad track mid-workout" and increase trust in recommendations.	High confidence
Workout Memory Engine	Use historical workout-session data to recreate successful past sessions and autoplay similar vibe songs.	Users repeat workout types and would value continuity from previously successful sessions.	Low confidence
Discovery Slider	A simple slider in autoplay allowing users to control ratio of familiar vs new music during autoplay.	Giving control over discovery helps match user's intent leading to better	Low confidence

Solution	Short Description	Key Assumption	Category
		recommendations aligned with specific mood	
Adaptive Intelligence	Track skip/completion/loop behavior specifically during workout sessions to dynamically tune future workout recommendations.	Workout-specific behavior signals differ from normal listening behavior and should be modeled separately.	High confidence
Prompt-Based Temporary Workout Playlist Creator	Allow users to describe workout vibe ("heavy leg day, aggressive motivational") and generate an instant temporary playlist that doesn't clutter library unless saved.	Users sometimes want precision control without long-term playlist commitment.	Moonshot
Mood-Based Shuffle	A shuffle button filtered by selected mood/intensity.	Users want better autoplay recommendations during workouts	High confidence
Wearable-Based Intensity Matching (Heart Rate Adaptive Music)	Use smartwatch heart rate data to dynamically adjust tempo/energy level of songs during workout.	Real-time intensity alignment increases immersion and reduces skips.	Moonshot

▼ Step 2: Prioritising Solutions (Converge)

Solution	Reach	Impact	Confidence	Effort	RICE Score (Sorted in Desc)	Remarks
Personalised Workout Playlist Generator	2	3	3	1	18	Has a strong user need, similar feature and all data points are already available, and users value familiarity (from the survey)
Adaptive Intelligence	3	3	2	2	9	Has a strong user need, seamless for customers, can be easily rolled out to a wider user segment
Dedicated Workout Mode	2	3	2	2	6	Has a strong user need, but assumes that users would help with giving the context, and needs multiple screens.
Discovery Slider	3	1	1	1	3	Would reach to a wider user segment as well, however, without a proper recommendation engine in place, this might not

Solution	Reach	Impact	Confidence	Effort	RICE Score (Sorted in Desc)	Remarks
						create a huge impact
Mood-Based Shuffle	3	1	1	1	3	Easy build since the shuffle button already exists and the mood filters already exist, just need to merge both feature capabilities into one, without a proper recommendation engine in place it might not have huge impact
Wearable-Based Intensity Matching (Heart Rate Adaptive Music)	1	3	2	3	2	Smaller user segment, has strong user signal, will need cross device integrations
Workout Memory Engine	2	2	1	3	1.3	Assumes the app knows successful sessions
Prompt-Based Temporary Workout Playlist Creator	1	2	2	3	1.3	Assumes the users can articulate their music needs, currently AI is still nacent in the product, AI usage can increase costs significantly

▼ Step 3: Wire-framing

Prototype for solution 1 - [Personalised Workout Playlist Generator](#)

Flow for solution 2 - [Adaptive Intelligence](#)

Prototype for solution 3 - [Dedicated Workout Mode](#)

▼ Step 4: Success Metrics

Goal: Increase "**listening session duration**" during workouts for frequent gym goers

P0 Solution: Personalised Workout Playlist Generator

Metric Type	Metric Name (Calculated per detected workout session)	Definition	Why it matters
Key Metric	Average Workout Listening Session Duration	Average number of minutes music is played continuously during a detected workout session	It shows users spent more time listening to music and focusing on their workout rather than spending time choosing/adjusting their songs mid workout.
Secondary Metric	Skip rate	Ratio of (number of songs skipped) to (total number of songs played)	Shows if the auto suggestions are working well for the user to let them focus on their workout
Secondary Metric	Workout Playlist Reuse (7-Day Feature Retention)	Percentage of users who use the personalised workout playlist again within 7 days	Shows if the feature is adding continued value for users and results in habit formation
Guardrail Metric	Discovery Rate	Percentage of songs played during workout sessions that are new to the user	Ensures personalisation does not overfit to old songs thereby reducing discovery

▼ Step 5: Pitfalls & Mitigations

Assumption at risk	Failure mode	Impact (H/M/L)	Likelihood (H/M/L)	Mitigation (practical)	Detection signal (metric)	Containment / rollback
Correct identification of workout session	Auto detection of workout session fails or if workout playlists are used during non workout sessions	High	High	Get manual confirmation of workout session from users for first month of feature usage	Workout playlists usage per day	Limit the number of times the feature can be used in a day

▼ Step 6: PRD

 Personalised Workout Playlist Generator