Intern Approach Document: AI-Powered Music Generation Application

1. User Customization Features:

To meet user expectations, our approach involves developing a comprehensive customization system. Users will be able to tailor music tracks based on energy levels, genre mix, and tempo. Advanced sliders and input fields will enable precise adjustments, ensuring a personalized music experience.

2. Technical Strategies for Genres and Durations:

Our technical approach prioritizes the incorporation of AI models trained on Progressive house, Psychedelic techno, and Deep house. Additionally, we will implement algorithms for dynamically adjusting music durations, adhering to the specified range of up to 9 minutes. The use of deep learning techniques will be explored to capture the essence of each genre effectively.

3. User Interface Design:

A user-centric design is pivotal for a seamless experience. Our user interface will feature an intuitive layout with sliders for customization, a preview section allowing users to sample up to 5 tracks simultaneously, and a straightforward download option with selectable quality up to 320kbps. The design will draw inspiration from Loudly.com, ensuring familiarity and user comfort.

4. Algorithm Improvement for Variation:

To enhance the musical output, our approach includes the implementation of an advanced algorithm. This algorithm will specifically target the avoidance of repetitive structures and introduce variations in both the start and end of generated songs. Leveraging machine learning models will be essential in achieving this goal.

5. User Feedback and Adjustment:

A dedicated "Contact Us" section will be integrated, providing users with a direct email for feedback and adjustment requests. Regularly monitoring user input and feedback will be pivotal in refining the algorithm and addressing user preferences. The feedback loop will be an integral part of our continuous improvement strategy.

6. Development Roadmap:

- Phase 1: Research and Model Training

  - Research on genre-specific AI models.

  - Training and fine-tuning models on the specified genres.

- Phase 2: Customization System Development

  - Implement user customization features and sliders.

  - Develop algorithms for adjusting music durations dynamically.

- Phase 3: User Interface Design and Testing

  - Design an intuitive user interface inspired by Loudly.com.

  - Conduct thorough testing for usability and functionality.

- Phase 4: Algorithm Implementation and Optimization

  - Integrate the advanced algorithm for variation and structure improvement.

  - Optimize algorithms for efficient processing and real-time track generation.

- Phase 5: Android Version Release

  - Launch the application on the Android platform.

  - Gather user feedback and assess performance.

- Phase 6: Future Versions (iOS and Web)

  - Plan and initiate development for iOS and web versions.

  - Address platform-specific considerations for each version.

By following this approach, we aim to deliver a state-of-the-art AI-powered music generation application that not only meets but exceeds the outlined requirements, providing users with a highly customizable and enjoyable musical experience.

Done By: Anshula Killamsetty