Must-Have Requirements

1. Automated Audio-to-Video Pipeline
   * Convert audio input into a dynamic video output automatically.
   * Work effectively across a wide range of musical genres (4+).
2. FLiT (Fairy Light Trail) Generation
   * Generate FLiTs based on audio analysis.
   * Control FLiT properties and movement based on:
     + Volume
     + Vibrato
     + Reverb
     + Frequency
     + Tempo
     + Sustain
     + Timbre
     + Proximity and behavior of nearby FLiTs
3. Audio Analysis Engine
   * Detect and break audio into distinct components.
   * Compute relevant audio features for FLiT behavior mapping.
   * Automatically determine the medium volume level of a track (with optional manual adjustment).
4. Speech Transcription and Application
   * Song lyrics may optionally be shown and interacted with by FLiTs
5. User Customization Options
   * Color Options
     + Choose color palette.
     + Set color usage mode (e.g., by instrument, emotion, or other)
   * Technical Settings
     + Select video resolution.
     + Specify input/output file locations.
   * Speech Transcription
     + Enable or disable speech transcription (simple toggle).
     + Display transcribed words in time with audio
6. Export/Output
   * Generate final video output from audio input and FLiT visualizations.

Nice-To-Have Requirements

1. Video Editing Features
   * Include camera movement options
   * Integrate word placement tools for transcription display
2. Other Visual Settings
   * Select background image.
   * Adjust image durability under FLiT influence.
   * Choose from multiple visual styles (e.g., 8-bit, watercolor, plain).
   * Set FLiT synchronization behavior (e.g., synchronized movement).
   * Set text interaction mode (walls, FLiT children, turned on by FLiTs, etc.)
3. Free Public Release
   * Distribute the application for free for one year.
   * Include a Patreon link on the official website.
4. Other Technical Settings
   * Set CPU/GPU usage preference.

Demo Version Features

1. Basic audio file input.
2. Audio component breakdown (basic).
3. Simple FLiT visuals on a black background.