DAWZY: A New Addition to AI powered "Human in the Loop" Music Co-creation

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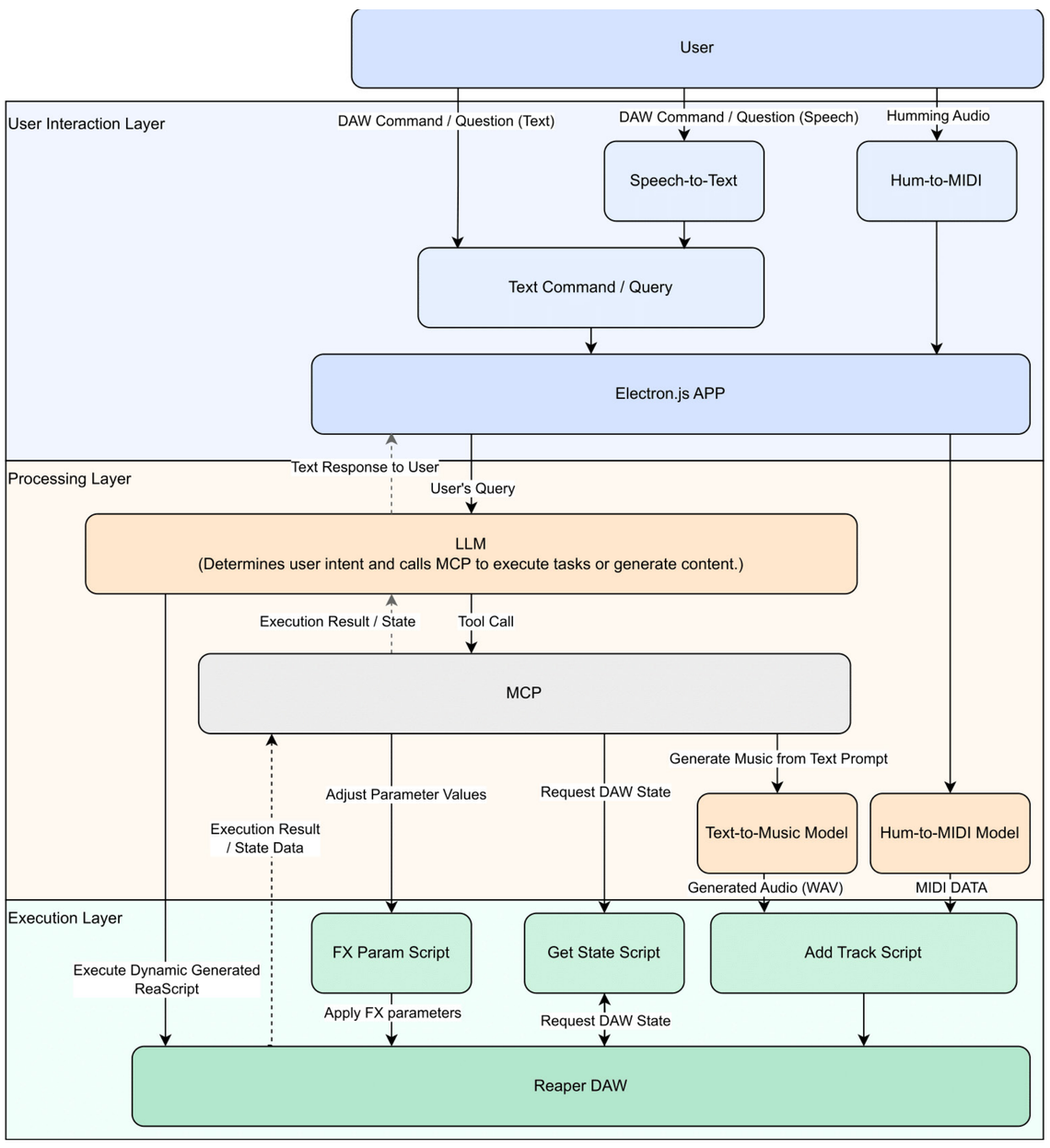
1. Motivation

Modern music production relies on **Digital Audio Workstations (DAWs)** that offer fine-grained control but **overwhelm users** with complex interfaces and technical steps. Translating creative intent—such as "*make the vocals warmer*" —into low-level edits interrupts artistic flow and requires deep domain knowledge.

DAWZY bridges this gap by turning **natural-language input (text, voice, or humming) into precise, reversible DAW actions**. Instead of navigating hundreds of buttons and sliders, users express intent directly and receive interpretable results with full control and transparency.

DAWZY preserves the DAW as the creative hub, supports **human-in-the-loop interaction**, and reduces the technical barrier for music producers at all experience levels.

2. System Overview



DAWZY consists of **three layers**:

- **User Interaction Layer**: Electron.js interface that captures **text, speech** (transcribed via Whisper), and **humming** (converted to MIDI via BasicPitch).
- **Processing Layer**: A **GPT-5-based LLM** interprets intent, **calls** Model Context Protocol **(MCP) tools** to **query session state, adjust FX parameters,** or **generate audio** via MusicGen.
- **Execution Layer**: Executes **safe, reversible ReaScripts** in REAPER through ReaPy, ensuring **grounded edits and undo functionality**.

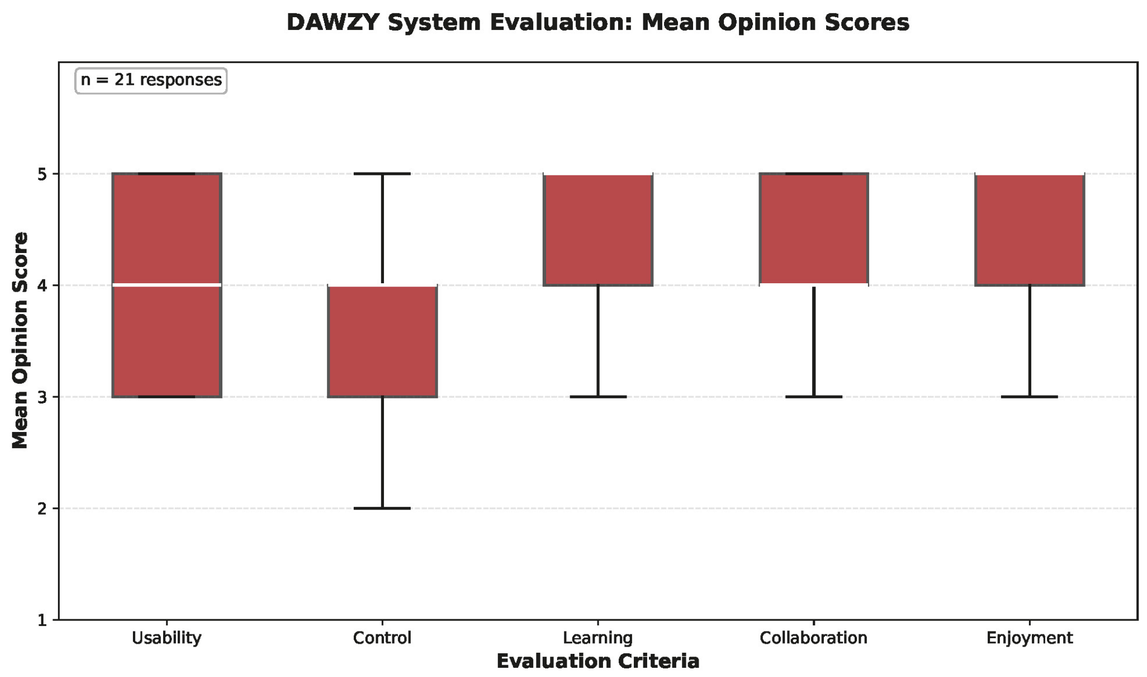
This architecture enables an **adaptive workflow** where users can **create, modify, and learn**—without losing creative control.

3. Evaluation

	DAWZY				Ableton-MCP
Task	GPT-5	Qwen 480B	GPT-OSS 120B	Claude 4.5 Sonnet	Claude
Wavy	3	2	2	3	0
Bouncy	2	1	1	2	2
Fade	2	1	2	1	0
Success Rate (out of 9)	78%	44%	56%	67%	22%

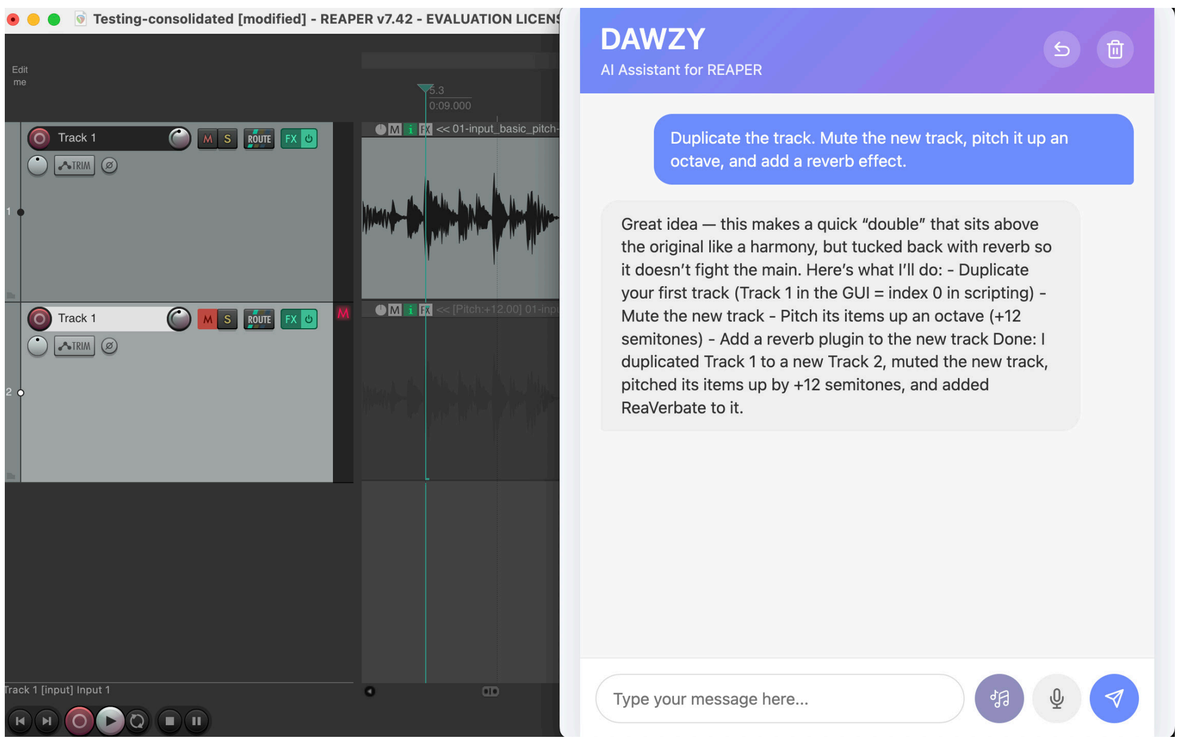
Quantitative Performance:
We tested DAWZY and comparable systems across three creative tasks: **Wavy, Bouncy, and Fade**.

GPT-5 achieved a 78 % success rate (7/9), outperforming open-source and commercial baselines by maintaining consistent, context-aware editing.



A **Mean Opinion Score (MOS)** evaluation with **N = 21** participants rated DAWZY **across five dimensions** on a **5-point scale**.
All categories scored **above neutral**, with the **highest ratings for Enjoyment** (M = 4.48, SD = 0.60*) **and Learning** (M = 4.38, SD = 0.74*). These results indicate that users found **DAWZY intuitive, engaging**, and **effective for creative collaboration**.

4. Demo



Code

Demo

Website