Wolfie – A Mood-to-Music Generator

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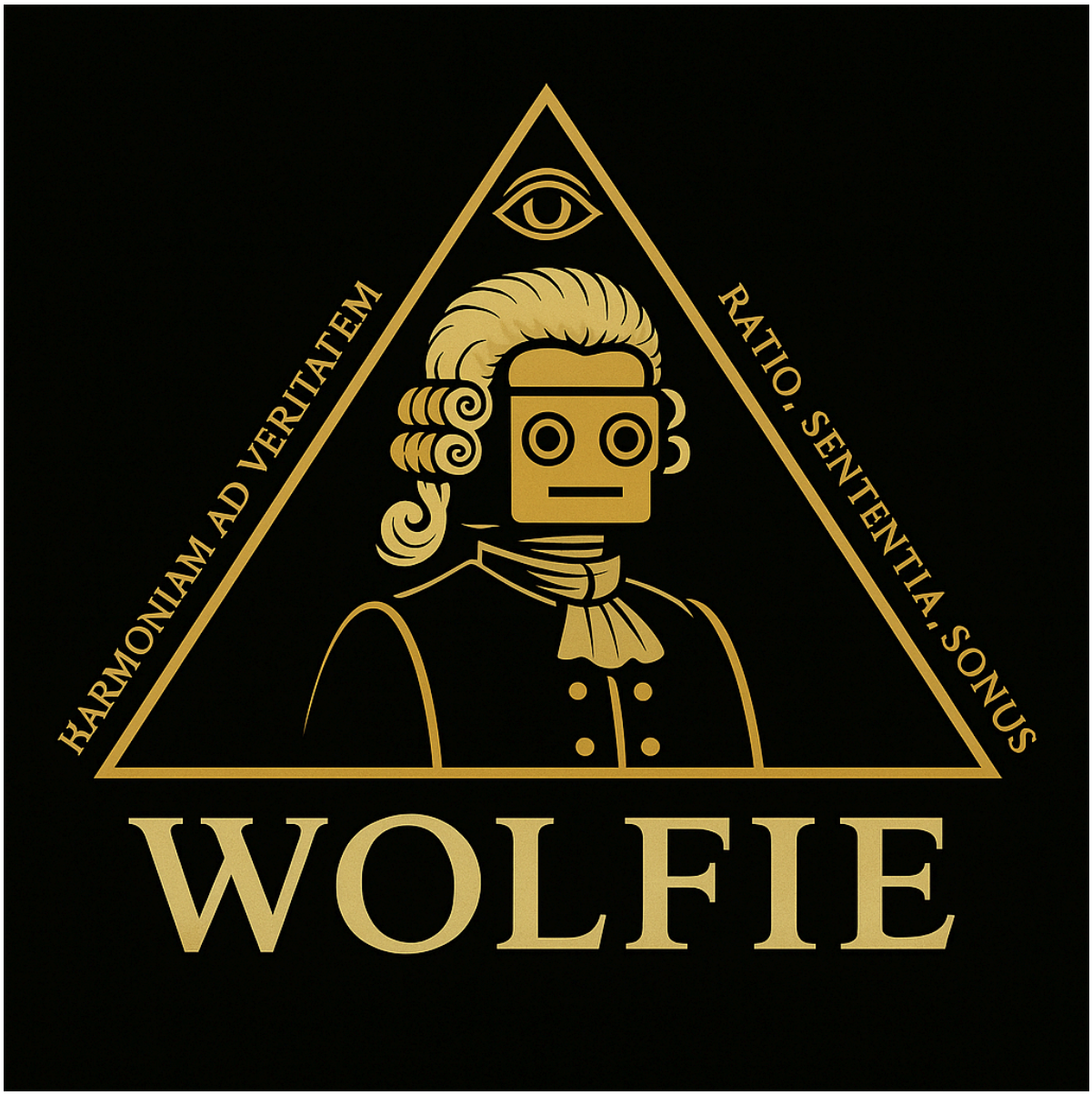
Project Start Date: March 2025
Working Title: *Wolfie – A Mood-to-Music Generator*

Purpose:
To design and develop a creative AI system that generates original music based on user-selected moods. The project combines data science, emotion-mapping, and procedural music composition using Python and MIDI-based tools, drawing inspiration from classical composers such as Mozart, Bach, and Beethoven.



March 27, 2025

- Project idea finalized: Build a tool that takes a mood input and generates a short musical piece that matches the emotional tone.
- Decided on the name **Wolfie** (nod to Mozart's nickname, “Wolfie”)
- Set up dev environment using Ubuntu, VS Code
- Installed core packages: `pretty_midi`, `fluidsynth`, `note_seq`, `magenta`
- Goal: combine music theory + mood mapping + generative logic

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March 31, 2025

- Defined initial mood-to-music mapping:
    - 5 moods (Happy, Sad, Angry, Chill, Uplifting)
    - Mapped each to tempo ranges, instrument types, and musical modes
- Sketched system architecture:
  `Mood Input → Musical Parameters → Melody Generator → MIDI Output → Playback`

Planned Next Steps (Early April):

- Create Python script to generate 8-bar melody based on selected mood
- Add MIDI file export and live playback
- Build simple CLI interface (text-based input for now)
- Continue documenting progress weekly

Long-Term Goals:

- Add web interface (Streamlit or Flask)
- Expand to include text-to-mood interpretation
- Experiment with neural net generation (LSTM or Transformer on classical data)
- Use works of Bach, Mozart, Beethoven as inspiration/training examples
- Optional: introduce harmony, rhythm layering, or dynamic mood transitions

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Notes:

- Project is original and independently developed by Shahriar Nekouei
- All design choices, code, and concept mappings are authored by creator
- This document serves as an official project log for timeline tracking, ownership, and development proof

April 1, 2025

- Added new long-term components to project vision:
    - Integrate **sentiment analysis using NLP** to convert user input (e.g., mood descriptions or journal-style text) into musical emotion parameters.
    - Incorporate **neural networks** for generative composition—exploring LSTM or Transformer architectures to improve melody structure.
    - Use **classical compositions by Bach, Mozart, and Beethoven** as a public-domain training corpus to infuse harmonic richness and structure into generated music.
- Goal: Create a system that blends natural language input, emotional intelligence, and music theory to generate expressive, mood-based compositions.

  “Wolfie started as a deeply personal idea—connecting my love for music with my skills in data science. It’s about more than code; it’s about translating feeling into sound. As I build this project, I’m learning not just technical skills, but how to trust my creative instincts and see them through.”