Title : Amica: AI Persona Chatbot Interface

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ABSTRACT

This project focuses on developing a website for interactive communication with 3D characters, comprising four primary components and six supplementary sub-components. The core objectives include: 1) a semi-automatic system that enables 3D characters to initiate interactions autonomously, (2) a function-calling feature that detects user keywords and retrieves relevant information via external APIs, (3) enhanced remote accessibility through mobile device connectivity, and (4) a plug-in system for future feature expansion. The sub-components further improve system functionality and user experience by: (1) integrating additional text-to-speech engines (Piper, Coqui, RVC), (2) enhancing the user interface with a splash screen, image upload feature, and a consistent exit button, (3) resolving issues related to the large language model (LLM), (4) enabling conversation import/export, (5) implementing emotional word filtering for refined interactions, and (6) expanding 3D characters' facial expressions. By integrating these elements, the project aims to create an immersive and dynamic digital communication platform, enhancing user engagement with 3D characters.

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