

PersonaX: Your Digital Reflection

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Abstract: *The rapid advancement of Artificial Intelligence (AI) and Machine Learning (ML) has enabled the creation of highly interactive virtual assistants capable of understanding human emotions and context. This paper presents AI Twin, an intelligent, emotion-aware, and personalized desktop assistant designed to replicate human-like communication, adaptive learning, and dynamic memory. Unlike traditional AI chatbots that provide static responses, AI Twin utilizes Retrieval-Augmented Generation (RAG), dynamic prompt conditioning, and emotion-based personality mapping to deliver contextual, human-like conversations. The system integrates modules from Machine Learning (ML), Artificial Intelligence (AI), Data Science (DSBDA), and Database Management Systems (DBMS) to manage memory, user profiles, and behavioral learning.*

The AI Twin architecture consists of a multimodal interface supporting voice, text, and video interaction. It also includes a control panel and progress dashboard for user monitoring and model control. Through dynamic context retrieval and daily memory updates, the assistant continuously learns from user interactions, maintaining a personalized conversational identity.

Experimental analysis demonstrates enhanced contextual accuracy, emotional adaptability, and user engagement compared to conventional assistant systems. The AI Twin project contributes to the evolution of digital companionship and adaptive human-AI collaboration.

Keywords: Artificial Intelligence, Emotion Recognition, Large Language Model, Retrieval- Augmented Generation, Human-Computer Interaction, Personalized Assistant, Dynamic Prompt Engineering

