

AMI: A Chatbot for Emotional Support in Romanian

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Abstract

Background: Assistance for mental health-related issues remains largely inaccessible for many individuals. Factors such as economic stability, place of residence and even societal expectations play a crucial role in whether a person seeks or receives professional help. According to the "Don't let depression control your life! Your mental health matters!" campaign conducted by the National Institute of Public Health, untreated conditions such as anxiety, depression, and chronic stress can lead to social withdrawal, isolation, and deterioration in overall well-being.

Methods: By implementing a multi-component system that offers functionalities such as diary, mood monitoring, relaxing music, games and an artificial intelligence-based chatbot, Ami supports users who hesitate to share the problems they face and their emotional state with others. The technology underlying the model will be selected based on the results obtained from testing the quality and relevance of the responses of several LLM models adapted to a Romanian dataset. The dataset contains a number of 384 filtered questions-answers divided equally into friendly and professional responses obtained from a public dataset, but also 150 questions-answers developed based on specialized literature in cognitive-behavioral therapy (CBT) adapted to the format. The question-answer set has been translated and culturally adapted to the Romanian context. The REST-based architecture proposes modern technologies such as FastAPI for the backend, PostgreSQL for the database and React Native and NativeWind for the frontend. Security is an important concept, being ensured by using OAuth2 with password and Bearer with JWT tokens. *Results:* Ami is designed to offer personalized support to its users. The anticipated outcome is a decrease in the level of depression and anxiety symptoms of Romanian users after engaging with the application. Unlike a regular assistance hotline, the Ami chatbot is available 24/7 and leverages natural language processing to deliver adaptive and context-aware responses through two modes, friendly and professional. *Conclusions:* Ami, a chatbot integrated into an AI-driven platform, provides adaptive responses in Romanian. The application is not designed to replace professional help, if suicidal risk is detected through risk detection mechanisms, the conversation ends and the user is provided with information about professional assistance.

Keywords: AI-driven mental health support; Natural Language Processing (NLP); Conversational AI; Cognitive behavioral therapy.

