EMMA - EMPATHETIC ARTIFICIAL INTELLIGENT AGENT FOR COMPANIONSHIP

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Abstract - Artificial Intelligence (AI), along with Natural Language Processing (NLP), has made a revolutionary impact on technology in recent years. The usability of Large Language Models (LLMs) has become a primary focus among enthusiasts. However, without sophisticated computational power and sufficient finances, LLMs are restricted from being used by individual developers. This paper examines how empathy can be embedded into LLMs. The implemented model will influence the user's mentality in a positive manner by exploiting the findings of Cognitive Behavioral Therapy (CBT). The approach taken to conquer this goal consists of (1) prompt-engineering methods, which customize and automate the generated prompt with the intention of including prompt-based learning opportunities for the model, and (2) a supervised model to enrich the context of the conversations. Thorough comparisons, along with the experimental processes carried out, are discussed here. Finally, it's factually proven that this strategic, intuitive approach towards the archival of this goal could lead to greater success, shining light on a new perspective in the field of NLP.

Keywords: *AI, NLP, LLM, Sentiment Analysis, CBT*