

An Action Research Approach to Building an Enterprise-Specific Chatbot (ESCB)

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Abstract

Organizations are increasingly turning to chatbots to provide customer support via computer-generated, conversational, natural language answers to human queries. This paper describes a technique for creating an enterprise-specific chatbot (ESCB). We conducted an action research study to investigate the possibility of creating an ESCB with a local policy document knowledge base using readily available software tools, a basic level of programming competence, and user community feedback. The applied research on this chatbot leverages the power of Artificial Intelligence (AI), Natural Language Processing (NLP), and proprietary local data to transcend the common limitations of conventional chatbots. Utilizing three quick-turn action research cycles, we evolved the chatbot to demonstrate a high level of accuracy and relevance in its responses. The results indicate that our chatbot is becoming increasingly efficient in interpreting user queries, extracting necessary information, and formulating appropriate responses. The work underscores the significant potential of AI-powered chatbots for data interaction and the affordability of AI implementation, paving the way for organizations with limited resources to leverage the power of AI in their local operations.

Keywords: Chatbot, Action Research, Proprietary Data, Large Language Model, AI, Semantic Search

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