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AI Healthcare Bot System

Miss. Sejal Gajanan Mahalle, Prof. S. V. Athawale, Prof. D. G. Ingale,
Prof. S. V. Raut, Dr. A. P. Jadhao
Department of Computer Science and Engineering
Dr. Rajendra Gode Institute of Technology and Research, Amravati, Maharashtra, India

Abstract: *This paper presents a comprehensive design,implementation blueprint, and evaluation framework for an AI Healthcare Bot System a conversational agent aimed at supporting patients and clinicians with triage, symptom checking, appointment scheduling, medication reminders, and basic health education. We cover background and motivation, related work, system architecture, core algorithms (NLP, dialogue management, knowledge base integration), data sources, evaluation metrics, a sample experimental setup, security & privacy considerations (HIPAA/GDPR), ethical concerns, limitations, and future directions. The paper also provides sample dialogues, pseudocode for main modules, and an extensible roadmap for researchers and practitioners to build safe, effective, and regulatory-compliant healthcare conversational agents.*

Keywords: Artificial Intelligence (AI), Healthcare Chatbot, Medical Diagnosis, Natural Language Processing (NLP) Machine Learning (ML), Patient Monitoring

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