RUCU Smart AI: An Intelligent Digital Assistant for Ruaha Catholic University

Background of the Study

The rapid advancement of Artificial Intelligence (AI) has transformed information access and service delivery across higher education institutions. Universities are increasingly adopting intelligent digital systems to enhance communication, reduce administrative workload, and improve user experience. At Ruaha Catholic University (RUCU), students, staff, and visitors frequently encounter challenges in accessing accurate and timely academic and administrative information. This project proposes the development of an AI-based digital assistant to address these challenges through automated, intelligent information dissemination.

Problem Statement

Currently, access to essential university information such as admissions procedures, fee structures, academic programs, schedules, and office locations often requires physical visits or manual assistance from staff. This results in delays, congestion at administrative offices, inconsistent information delivery, and reduced service efficiency. The absence of a centralized, automated information system necessitates the development of an intelligent solution capable of providing reliable information on a continuous basis.

Objectives of the Project

The main objective of this project is to develop an AI-powered digital assistant for Ruaha Catholic University. The specific objectives are to:

- To design an intelligent system capable of responding to RUCU-related queries in real time.
- To improve accessibility and accuracy of university information.
- To reduce administrative workload and service delays.
- To enhance student support through digital transformation.
- To provide an open-access platform that does not require user authentication.

Scope of the Project

The project focuses on information dissemination only. The system will provide details on admissions, academic programs, fee structures, examination timetables, academic calendars, campus offices, hostels, and general university guidelines. The assistant will be implemented as a web-based chatbot accessible via mobile and desktop browsers. Transactional services such as payments, registrations, and personal student data access are excluded.

Methodology

The project will employ a system development methodology involving data collection from official RUCU documents, integration of a Large Language Model (LLM) API for natural language processing, development of a web-based user interface using HTML, CSS, and JavaScript, backend data management, system testing for accuracy and usability, and deployment on an online hosting platform.

Expected Outcomes

The expected outcomes include a functional AI-based digital assistant for RUCU, improved access to accurate and consistent information, reduced congestion at administrative offices, enhanced user satisfaction, and a scalable digital solution aligned with the university's modernization goals.

Significance of the Study

The project will contribute to improved institutional efficiency, enhanced student experience, and the adoption of AI-driven solutions within higher education. It will also serve as a foundation for future intelligent systems at Ruaha Catholic University.