CareerBot - Project Abstract

Abstract

CareerBot is an AI-powered career counseling agent designed using IBM Watsonx and Granite models. It provides real-time, personalized guidance to students based on their skills, interests, and market trends. Using Retrieval-Augmented Generation (RAG), the bot responds to user queries in a multilingual and adaptive manner. This project addresses the gap in scalable, accessible, and intelligent career guidance, especially for rural and underserved learners.

🔍 Additional Abstract Content to Include

CareerBot not only solves the problem of limited access to career counseling but also brings the power of AI to democratize guidance for students from diverse backgrounds. The integration of **Watsonx.ai with Granite 8x8B** allows the system to process natural language queries and respond with highly relevant, real-time suggestions.

Through the use of **Retrieval-Augmented Generation (RAG)**, the bot can fetch up-to-date data from trusted academic and professional sources before generating answers, ensuring both **accuracy** and **contextual awareness**. The solution is scalable and can serve thousands of users simultaneously when hosted on **IBM Cloud using Code Engine**.

The AI agent adapts its responses based on user profiles, such as academic background, interests, and region. It supports **multilingual inputs**, making it more inclusive for students who may prefer regional languages like **Telugu, Hindi, or Tamil**.

CareerBot is a prime example of combining **machine learning**, **cloud computing**, and **natural language processing (NLP)** to build a solution that addresses a real-world challenge in the education domain. It serves as a **virtual mentor** that is always available, responsive, and intelligent.

□ What This Adds:

- Stronger focus on AI/ML and NLP
- Clearer mention of Watsonx, Granite, RAG

- Social impact (regional languages + accessibility)
- Cloud deployment strength