# AI Chatbot System

Title: "Designing an AI Chatbot with Natural Language Understanding" Description: In this assignment, you will design and develop an intelligent chatbot capable of answering user queries based on a pre-defined knowledge base. You must integrate NLP techniques for intent recognition and entity extraction using libraries such as spaCy or Hugging Face Transformers. The chatbot should handle small talk, FAQs, and context-based follow-up questions. You must implement a simple front-end interface using HTML/JS or React, connected to a Flask or FastAPI back end. Your report should include the data preprocessing pipeline, model design, chatbot flow diagrams, and performance evaluation based on F1 and accuracy metrics.