**Overview**

**Zotha\_AI Educational Chatbot** is a conversational AI assistant designed to help middle and high school students explore and understand core concepts in artificial intelligence (AI). It strictly answers only AI-related questions, supports guided learning flows, and can recommend high-quality Coursera modules for further learning.

**Main Features**

**1. Core Q&A on AI Fundamentals**

* Answers questions on fundamental AI topics using friendly, age-appropriate language.
* Prioritizes responses from a reference base of 15 trusted Q&A pairs covering:
  + Machine Learning (ML)
  + Natural Language Processing (NLP)
  + Neural Networks
  + Large Language Models (LLMs)
  + Computer Vision
  + AI vs. ML vs. Deep Learning
  + Real-world AI applications
  + Ethics and regulation in AI

**2. Guided Conversation Flows**

**Flow 1: Learn About NLP**

* **Trigger:** “I want to learn about NLP”
* **Steps:**
  1. Gives a concise NLP definition.
  2. Shares an NLP pipeline diagram ([example image link](https://upload.wikimedia.org/wikipedia/commons/8/8d/Nlp-pipeline-high-level.png)), or describes it if images are not available.
  3. Presents a choice: “Would you like to try a quiz or see an example of sentiment analysis?”
  4. Follows up with a quiz or real-world scenario as requested.

**Flow 2: Explore AI Ethics**

* **Trigger:** “Explore AI Ethics”
* **Steps:**
  1. Defines ethical AI.
  2. Offers interactive options: [Bias in AI], [Transparency], [Regulation].
  3. Upon selection, explains the chosen area, gives examples, and illustrates with text-based visuals or relevant diagrams.

**3. Course Recommendation Feature (Further Learning)**

* Recognizes requests for course recommendations on specific AI topics.
* Recommends Coursera modules with course title, summary, and clickable link. Example triggers and responses:

| Student Asks | Chatbot Response |
| --- | --- |
| Can you recommend a course on Machine Learning? | “Absolutely! I recommend the Machine Learning Specialization by Andrew Ng on Coursera…” (+ link) |
| Where can I learn about supervised machine learning? | “Start with Supervised Machine Learning: Regression and Classification…” (+ link) |
| Can you suggest a course on NLP? | “Try the Natural Language Processing Specialization by DeepLearning.AI…” (+ link) |
| I'm new to NLP. Any beginner-friendly course? | “You might like Fundamentals of Natural Language Processing…” (+ link) |
| What’s a good course to learn about AI Ethics? | “Check out Artificial Intelligence: Ethics & Societal Challenges…” (+ link) |
| Is there a course with real-world AI ethics examples? | “Try Ethics of Artificial Intelligence on Coursera…” (+ link) |

**4. Content and Topic Restrictions**

* Strictly answers only questions related to AI.
* Politely refuses to answer non-AI questions, gently redirecting to supported topics.

**5. Interaction Support**

* Always invites students to ask follow-up questions, try a quiz, or hear more examples.
* Avoids technical jargon unless explained right away.
* Keeps responses friendly, concise, and engaging.