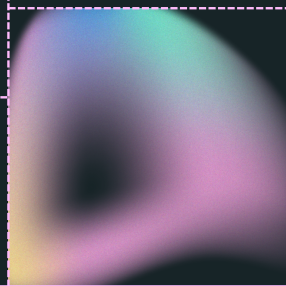# AI EduBot

brief overview for project

Project Title:

AI EduBot

Your Name: [EchoLogic]

Abrar Alanazi

Albandari Altalhi

Objective:

Develop an AI chatbot that can answer user queries based on the content of

YouTube videos, leveraging both audio (speech-to-text) and textual (video

transcripts) data.

Description:

The project aims to create an interactive AI chatbot that processes educational

YouTube videos on artificial intelligence, transcribes the audio content using

Whisper, breaks the transcription into manageable chunks, and stores the data

in a vector database (ChromaDB). The chatbot will then respond to user queries

related to the video content using a search mechanism that retrieves the most

relevant text chunks .

AI Techniques:	Speech Recognition (Whisper): For converting audio from YouTube videos into
	text .
	Text Chunking and Preprocessing: To break down transcriptions into smaller,
	contextually rich chunks .
	Sentence Embeddings (SentenceTransformers): To generate vector
	representations of text for efficient similarity-based search.
	Vector Database (ChromaDB): For storing and querying text chunks efficiently.

Applications:	YouTube Content Interaction: Allow users to ask questions and receive answers
	based on specific parts of educational content on artificial intelligence.
	Interactive Q&A Systems: Build a conversational interface for users to extract
	knowledge from AI-related video content .
	Knowledge Base Creation: Organize and make video content searchable and
	actionable for students, educators, and AI enthusiasts .
	Accessibility: Assist users with hearing impairments or language barriers by
	providing readable transcripts and summaries of educational AI videos .