University Chatbot System

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Date: June 30, 2025

1. Project Overview

This chatbot system is designed to assist university students by answering queries in Arabic and English.

2. Project Structure

university-chatbot/
■■■ frontend/   # React frontend
■■■ app.py   # Flask API
■■■ requirements.txt # Python dependencies
■■■ .env.example   # Environment variable template

3. Requirements

- Python 3.10+
- pip
- Node.js + npm
- Python packages: flask, flask-cors, openai, pytesseract, python-docx, PyMuPDF, Pillow, SpeechRecogn
- Tesseract OCR: sudo apt install tesseract-ocr

4. Deployment Steps on Linux

1. Install system and Python dependencies:
   sudo apt update
   sudo apt install python3-pip tesseract-ocr libgl1
   pip install -r requirements.txt

2. Set OpenAI API key:
   export OPENAI_API_KEY=your_key_here

3. Run Flask app with Gunicorn:
   gunicorn app:app --bind 0.0.0.0:5000

4. Build React frontend:
   cd frontend
   npm install
   npm run build

5. Serve frontend via Nginx from: frontend/build

5. Security Features

- Token-based API authentication (Header: Authorization: Bearer Abdo1234_UniversityGPT)
- CORS restricted to: https://university-chatbot-phi.vercel.app
- OpenAI API Key securely accessed from environment variables

6. Contact

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