Documentation on Netscore.ai

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1. Software Prerequisites

- **Python** (version 3.7 or higher): Required for running the Flask application.
- **Flask**: For creating the backend API.
- **Pandas**: For data processing and querying.
- **NumPy**: For numerical operations in data processing (if required).
- **OpenAI Python SDK**: For integrating GPT-based responses.
- **Web Browser**: For testing the frontend UI.

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2. Dependencies

Install the required Python libraries using pip:

pip install flask pandas NumPy OpenAI

Additional optional libraries for development:

- **Jinja2** (bundled with Flask): For rendering templates.
- **Bootstrap**: For styling the frontend UI.
- **JavaScript Libraries**:
    - jQuery (already included in the example).
    - Font Awesome (for icons).

3. Files and Folders

Ensure the following files and structure are present:

- **Flask App**:
    - app.py: Contains the Flask backend logic.
    - templates/: Folder containing the HTML templates:
        - index.html: Main chatbot interface.
        - config.html: Configuration page for file path and API key.
    - static/: Folder containing static assets like CSS, JS, and images:
        - styles.css: Custom styling.
        - script.js: JavaScript functionality for the chatbot.
- **Dataset File**:
    - A CSV file with data to be queried (provided dynamically during configuration).

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4. OpenAI API Key

- An active **OpenAI account**.
- An **API key** from OpenAI, required for accessing GPT models.
- Configure the API key securely in the application (provided during the configuration step).

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5. Hardware Requirements

- A system capable of running Python with at least:
    - 4GB of RAM (for small datasets).
    - Higher RAM and processing power for larger datasets.

6. Development Environment

(Optional but recommended):

- **Code Editor**: Visual Studio Code (VS Code) or PyCharm.
- **Python Virtual Environment**: To manage dependencies.

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7. Environment Variables (Optional)

For security and convenience:

- Store sensitive keys (e.g., OpenAI API key) in a .env file using packages like python-dotenv.

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8. Web Server (Optional for Deployment)

To deploy the Flask app for production:

- Use **gunicorn** (Linux) or **Waitress** (Windows).
- Consider hosting on platforms like **Heroku**, **AWS**, or **Google Cloud**.

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9. Frontend Compatibility

Ensure the frontend runs properly across popular web browsers:

- Chrome, Firefox, Edge, Safari.

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10. Debugging Tools

- Use Flask's debug=True for testing locally.
- Browser developer tools for inspecting UI issues.