Projects Overview

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1. Expert Chatbots for Knowledge Domains

- **Purpose**: Provide domain-specific question-answering by integrating user-uploaded documents.

- **Technologies**:

    - **Azure Blob Storage & AI Search** to store, index, and chunk documents.

    - **Prompt Flow** orchestrates user prompts, retrieval-augmented generation (RAG), and a re-ranking step for improved answer accuracy.

    - **OpenAI Model** processes the refined chunks to generate fact-grounded responses.

- **Impact**:

    - Developed a reusable template that's been deployed over 20 times.

    - Helps organizations efficiently set up knowledge-focused chatbots without manual reconfiguration each time.

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2. Assistant (OpenAI Assistant API)

- **Purpose**: Allow users to create custom task-specific assistants.

- **Features**:

    - **Custom Instructions**: Users tailor how the assistant should respond.

    - **File Search (RAG)**: Integrates with user-uploaded documents for domain-based Q&A.

    - **Code Interpreter**: Executes Python scripts for advanced computations, data analysis, and automation tasks.

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3. seoIQ

- **Purpose**: Improve search engine optimization (SEO) content creation.

- **Functionality**:

    - Users provide articles or web copy; the app generates SEO-optimized text aligned with targeted keywords and best practices.

- Refined **model instructions** ensure consistent SEO rules are followed (e.g., keyword density, meta descriptions, headings).

4. Data Subject Redact Tool

- **Purpose**: Automate document redaction to remove sensitive or personal data.

- **Features**:

    - Processes various file types to identify and redact names, emails, addresses, and phone numbers.

    - **Exceptions List**: Users specify terms that should *not* be redacted (e.g., authorized references).

    - **Use Case**: Streamlines large-scale manual redaction tasks (e.g., 10,000+ documents), saving significant time and effort.

5. "One App" (Combined Chat, RAG Chatbot, and Assistant)

- **Purpose**: Unify multiple functionalities—Normal Chat, RAG-based chat, and the Custom Assistant—into one modular platform.

- **Key Highlights**:

    - **Shared File Storage**: Users can manage documents in a single place.

    - **Incremental Feature Additions**: Modular architecture allows continuous updates and expansions (e.g., adding more tools, integrations).

    - Offers both **basic chat** and **domain-specific RAG** options, plus the ability to create specialized assistants with code execution, all under a single interface.

Conclusion

These projects collectively showcase expertise in **Retrieval-Augmented Generation**, **prompt orchestration**, **automated text processing**, **customizable assistants**, and **large-scale document workflows**. With seamless integration via **Azure** and the **OpenAI ecosystem**, each solution addresses a distinct organizational need—whether knowledge management, SEO optimization, data redaction, or a unifying multi-assistant platform.

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