GPT Azure Search Engine

Solution Offering

The Need for Better Document & Knowledge Management

Improving Access to Information with Smarter Search Solutions.

80%

- Amount of data in businesses that is unstructured

82%

- Of professionals say their companies struggle with efficient processing of unstructured data

$14 K

- Of productivity lost per year per information worker

Common applications of cognitive search

Enterprise Search
(Find the right document)

- Find the correct document from a large repository
- Increase your teams' productivity
- Enrich documents with AI: classification, Entity extraction, OCR, etc

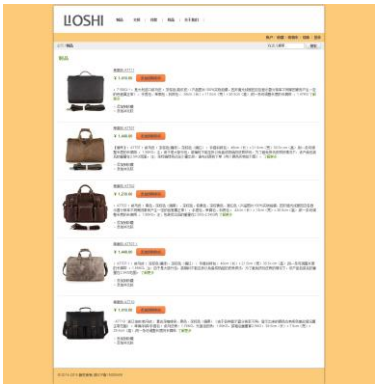
Knowledge Mining
(Find the right content)

- Find answers to questions in natural language
- Find relevant knowledge within large corpus of text using Semantic expansion
- Find the right paragraphs within text corpus to answer specific questions

Document Intelligence
(Digitize assets)

- Index structured documents such as contracts, invoices, sales orders, etc
- Extract important entities
- Find the relevant document
- Find the right information within documents

Catalogue Search
(ecommerce, customer-facing web & mobile apps)



- Increase relevancy of product results
- Prevent "zero search results"
- Deliver intelligent product recommendations based on user intent
- Increase clickthrough and conversion rates

GPT Azure Search Engine

Your organization needs a search engine that can make sense of all kinds of types of data, stored in different locations, and that can return the links of similar documents, but more importantly, **provide the answer to the question**!

In other words, you want **private** and **secured ChatGPT** for your organization that can interpret, comprehend, and answer questions about your business.

The Benefits

- Smart and Multilingual Search Engine: Provides links and answers to search queries, improving the search experience for customers and employees.
- Simplifies AI Implementation: Solves 80% of use cases for companies, without requiring retraining or hosting **OpenAI GPT** models.
- Python Code Deployment: All Azure services and configurations can be deployed via Python code, making it customizable and easy to maintain.
- Enriched Search Results: Uses Azure Cognitive Services to improve the accuracy of search results, detecting languages, OCR images, and recognizing entities.
- Streamlined Search Process: Uses LangChain as a wrapper for interacting with Azure OpenAI, vector stores, and constructing prompts.
- User-Friendly Interface: Uses Streamlit to build the **demo web** application in Python, providing an intuitive interface **easy to set up and show value**.
- Personalized Recommendations: Coming soon, the search engine will recommend new searches based on users' history, further improving the search experience.

2-Day Workshop Agenda

Day 1: Understand the Use Case, architecture and the Azure Services to use in the Solution

Time	Workshop Activity
9:00-11:30am (2.5 hours)	Quick Overview of the POC Goals: Understand the problem and the deliverables.
	Discuss the proposed Architecture
11:30-12:30pm (1 hour)	Lunch
12:30-5:00pm (4.5 hours)	Deep Dive on: • Azure Cognitive Search • Azure OpenAI • Azure Cognitive Services
	Plan for Next Day – Set up the collaborative IDE (Azure ML Service) and overview of notebooks.

Day 2: Hands on – Solution building, evaluation and deployment

Time	Workshop Activity
9:00-11:30am (*2.5 hours*)	**Deploy Azure resources, create your data source, Search Index, Skillsets, and Indexer within your Cognitive Search Service.** • Enrich Documents: Enrich your documents by creating specific skillsets that extract key information, apply OCR, generate translations, and more once your data source is created. • Define Index: Define your index with your data schema and connect it to our search service apart from your primary data stores, allowing us to achieve millisecond response times in our application. • Run through Indexer Pipeline: We use the data source, skillset, and index as inputs to run through our indexer pipeline. By creating the indexer on Azure Cognitive Search, it triggers the event to put the entire pipeline into motion.
11:30-12:30pm (*1 hour*)	Lunch
12:30-5:00pm (*4.5 hours*)	**Practice querying across your data leveraging the power of Azure Open AI, finalize your solution by deploying a web application to easily share with the MVP with others.** • Experiment with Azure Search alone vs Azure Search + OpenAI. Understand the difference of ChatGPT open version versus GPT Search Engine. • Evaluate the quality of results and answers of the GPT Search Engine. • Deploy Web Application: Deploy the web application by connecting it to the accelerator forked Github repository. This allows you to query data in a beautiful UI and receive top results powered by Azure Open AI.

The Prerequisites

Before setting the 2-day Workshop date:

the following items need to be in place

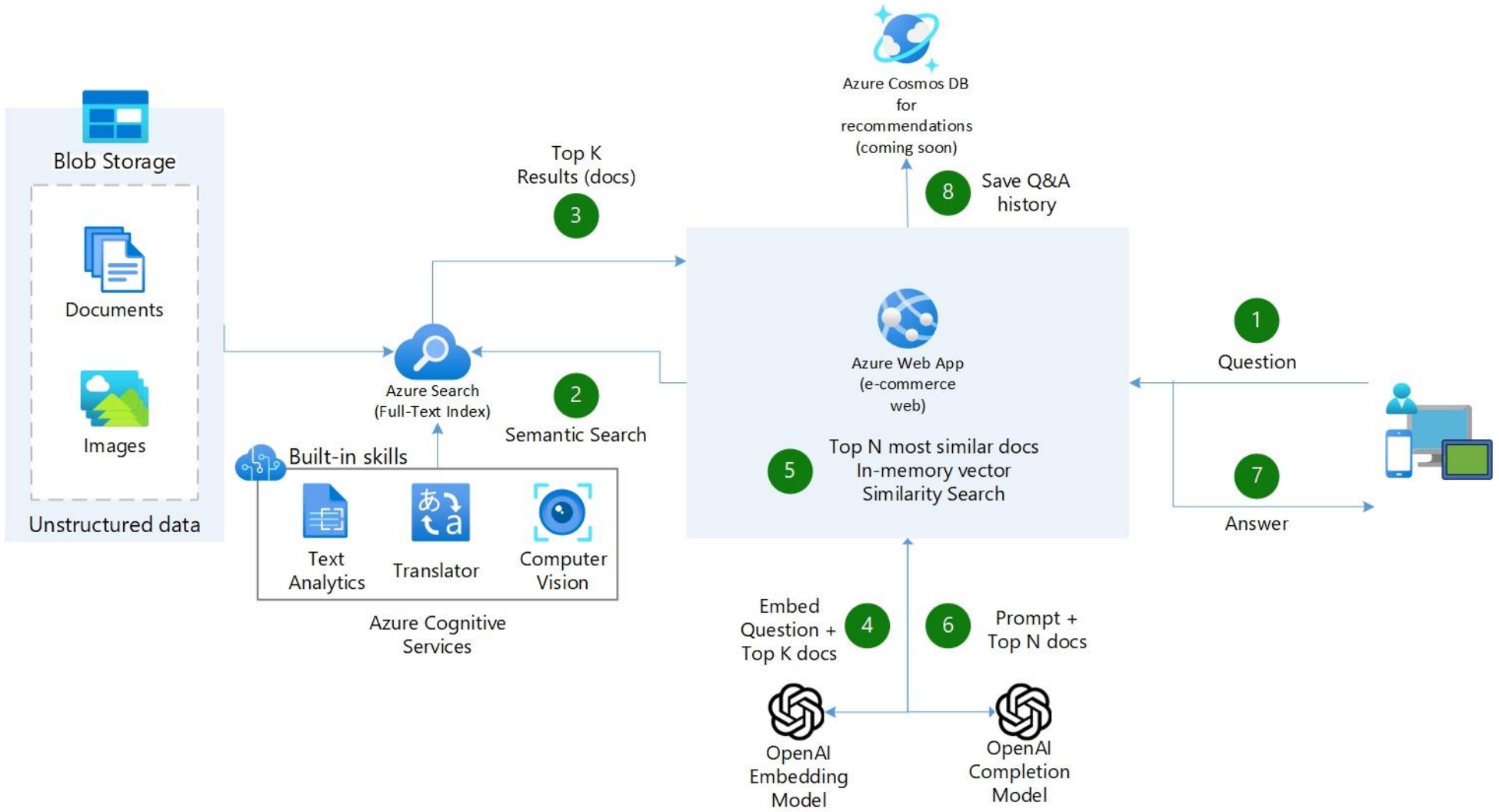
1) Accepted Application to Azure Open AI
2) Microsoft CSU team need to be added as Guests in your Azure AD
3) A Resource Group (RG) needs to be set for this Workshop POC, in the customer Azure tenant
4) The customer team and the Microsoft team must have Contributor permissions to this resource group
5) A storage account must be set in place in the RG
6) Documents must be uploaded to the blob storage account, at least one week prior to the workshop date
7) Azure Machine Learning Workspace must be deployed in the RG
8) Optional – Databricks Workspace deployed in the RG

Datasets:

The following datasets are needed for the POC and must be uploaded to the blob storage:

1) Data/Documents can be of the following types:
   - *CSV, EML, EPUB, GZ, HTML, JSON (see Indexing JSON blobs), KML (XML for geographic representations), Microsoft Office formats: DOCX/DOC/DOCM, XLSX/XLS/XLSM, PPTX/PPT/PPTM, MSG (Outlook emails), XML (both 2003 and 2006 WORD XML), Open Document formats: ODT, ODS, ODP, PDF, Plain text files (see also Indexing plain text), RTF, XML, ZIP.*

MVP Architecture



Next steps: How to engage?

Discovery Call

Call with the Customer to assess qualification to the program

Offering: 2-day CSU-led workshop with experts on OpenAI + Azure Search

30 minutes

Proof of Value

CSU team, during the workshop, helps the interested customer build a Minimum Viable Product (MVP) using their own data and their own Azure subscription

1 or 2 days

Deployment

Production Smart Search System building (code-with) and deployment with guidance and support from the technical specialists (CSA) and Partners

4-8 weeks

Thank you!