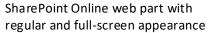
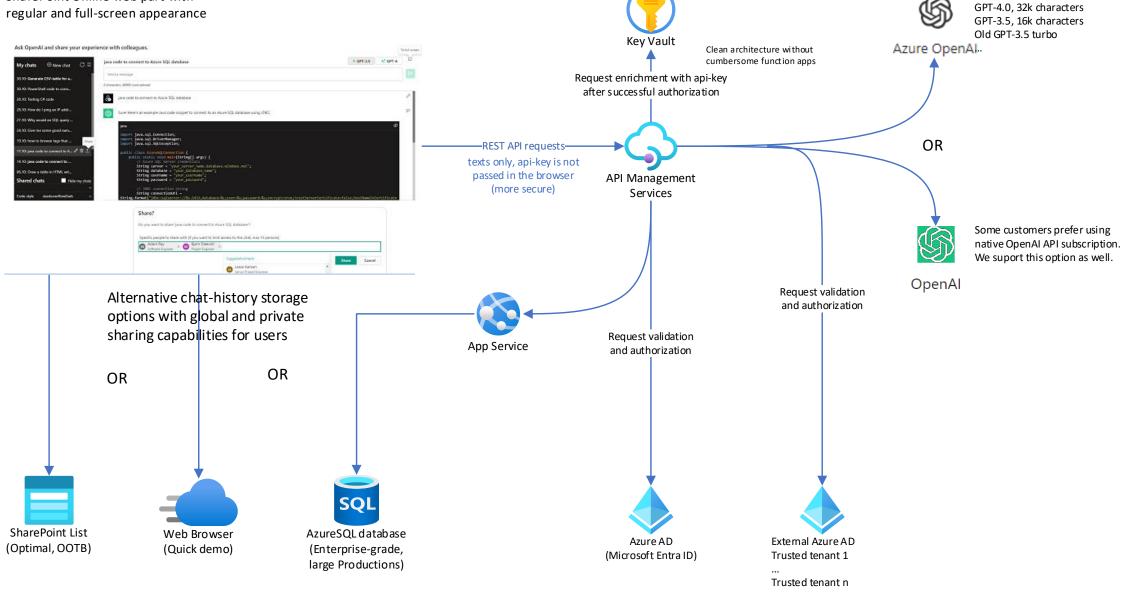
# AZURE OPENAI CHAT WEB PART FOR SHAREPOINT ONLINE

Paul Borisov, Cloud Architect

### Data Access Diagram

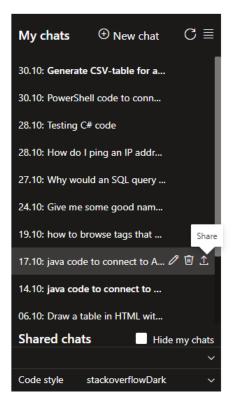


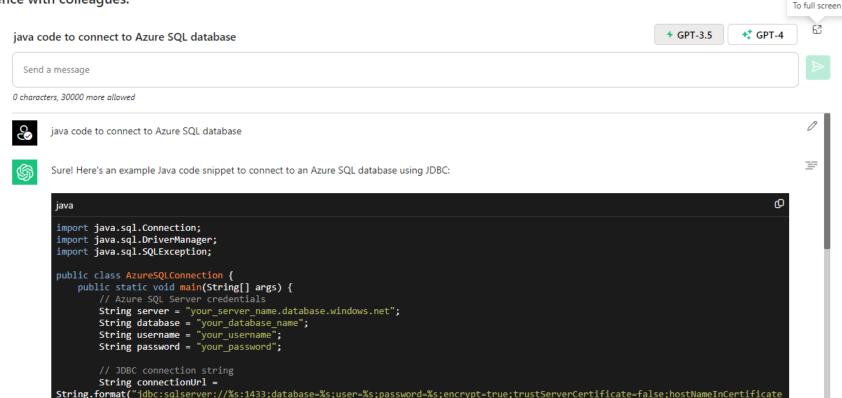


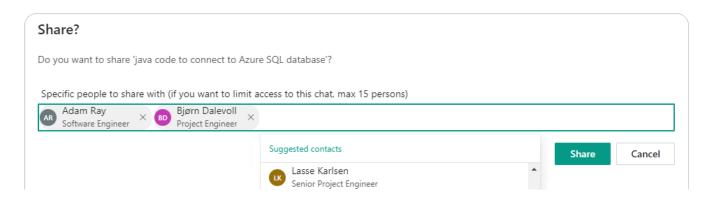
Straight support for all models:

# User Interface

Ask OpenAI and share your experience with colleagues.







# Full-Screen Mode



PowerShell code to connect to Excel file and extract data into CSV t GPT-4 LLM: gpt-4-32k Send a message 0 characters, 30000 more allowed Create a SQL query to select data from the Excel worksheet squery = "SELECT \* FROM [Sheet1\$]" Create a new command object \$command = New-Object -TypeName System.Data.OleDb.OleDbCommand(\$query, \$connection) Execute the query and get the result set \$result = \$command.ExecuteReader() columnNames = @()for (\$col = 0; \$col -lt \$result.FieldCount; \$col++) { \$columnName = \$result.GetName(\$col) \$columnNames += \$columnName Create a new CSV file to store the extracted data with UTF-8 encoding using FileStream \$csvFilePath = "C:\path\to\your\output file.csv" \$csvFile = New-Object -TypeName System.IO.FileStream -ArgumentList \$csvFilePath, [System.IO.FileMode]::Create, [System.IO.FileAccess]::Write \$csvWriter = New-Object -TypeName System.IO.StreamWriter -ArgumentList \$csvFile, [System.Text.Encoding]::UTF8 Write the column headers to the CSV file \$csvWriter.WriteLine(\$columnNames -join ",") Loop through the result set and extract the data while (\$result.Read()) { \$rowData = @() for (\$col = 0; \$col -lt \$result.FieldCount; \$col++) { \$cellValue = \$result.GetValue(\$col) \$rowData += \$cellValue \$csvWriter.WriteLine(\$rowData -join ",") Close the CSV writer, file, result set, and connection csvWriter.Close() \$csvFile.Close() \$result.Close() sconnection.Close() In this updated code, we replaced the StreamWriter with FileStream to create the CSV file. We then pass the FileStream object as the first argument to the StreamWriter constructor, and [System.Text.Encoding]::UTF8 as the second argument to specify the UTF-8 encoding. Please note that we need to close both the CSV writer (\$csvWriter) and the CSV file (\$csvFile) separately before closing the result set and the connection.

## Features

#### **Key features**

- Support for the latest text language models provided by Microsoft and Native OpenAI: GPT-4 32k, GPT 3.5 16k, GPT-4 Vision, GPT-4 1106, GPT-3.5 1106
- Unlimited Chats and Unlimited Chat History Length
- Chat Sharing: Unlimited for Everyone and Private for a limited number of Members
- Support for Full-Screen Mode. Support for Regular and Full-Width Site Page Sections
- Mobile-Friendly UI with simple customizations (CSS)
- Event Streaming to provide consecutive outputs of Al-responses
- Code Highlighter with options to select Highlight Styles.
- Upper and Lower Side positioning for the Prompt Area Textbox
- Full-Scale Localizations: English, Finnish, and Norwegian
- External Integrations, SharePoint Search, Company Users, Local Date and Time, PDF Uploads to Summarise their Content
- Image Analysis: Upload images to describe their Content (as of November 2023, this is available in Native OpenAl only)

#### **Advanced features**

- Built-in integration with API Management Service.
  - For customers that do not have it, the web part also supports direct queries to API with an api-key (configurable)
- Seamless support for Azure OpenAI and Native OpenAI API
- Alternative storage types to manage Chat History
  - SharePoint List: Supports up to 5000 Chats, Built-in "One-Click" list provisioning, Chat Privacy and Security Trimming for SharePoint Search
  - Azure SQL Database: Provides Enterprise-grade performance, Tested on 1 Million+ Chat records
  - Local Storage: it can be used to provide quick demo without long-time configurations

# External Integrations: SPSearch, Company Users, Local Date & Time

#### **How it works**

The Function Calling feature is available in both Azure OpenAI and Native OpenAI (more advanced version). The flow for using this feature typically looks like:

- 1. In the process of interacting with OpenAI, you can send a request with options to call available integration functions that you have provided.
- 2. If OpenAI determines that it requires specific data, it will request to call a function with parameters that it deems suitable.
- 3. To meet OpenAI's demand, you can call the function with the proposed parameters on behalf of OpenAI. This allows you to obtain raw results locally, which you can then submit to OpenAI. You have control over what data you submit.
- 4. If OpenAI determines that it needs more information, it may demand calling another function, and this process can continue as necessary.
- 5. OpenAl handles the received data and transforms it as you have requested. The final response from OpenAl will include the results based on the processed data.

```
// 3 show cases available in the web part:
// Search in SharePoint for "your text". Format the results as an HTML table.
// Get company users that have names starting with P. Format the results as an HTML table.
// Date, Time, Date and time.
export default class FunctionHelper {
   private static available: { [key: string]: any } = {
      companyUsers: this.companyUsers,
      currentDateOrTime: this.currentDateOrTime,
      currentDateAndTime: this.currentDateAndTime,
      peopleSearch: this.companyUsers,
      searchSharepoint: this.searchSharepoint,
};
```

# External Integrations

#### Find in SharePoint "IDD Questionnaire" and show search results as HTML table



Find in SharePoint "IDD Questionnaire" and show search results as HTML table



Here are the search results for "IDD Questionnaire" in SharePoint:

Title Author Size Path

Annex 3 - IDD Questionnaire for Corporates Olivia Roca;SP Admin 85,822 bytes Link

Annex 4 - IDD Questionnaire for State Owned Entities (SOEs) Olivia Roca;SP Admin 85,302 bytes Link

Annex 5 - IDD Questionnaire for Municipalities, Ministries and Other Government Agencies Olivia Roca;SP Admin 84,004 bytes Link



Show me company employees with names that start with p



Here is a list of company employees with names that start with the letter "P":

- Patti Fernandez
- Pradeep Gupta



Show me company employees with names that start with H



Here are the company employees with names that start with the letter "H":

- Harri Niemeläinen
- Henrietta Mueller

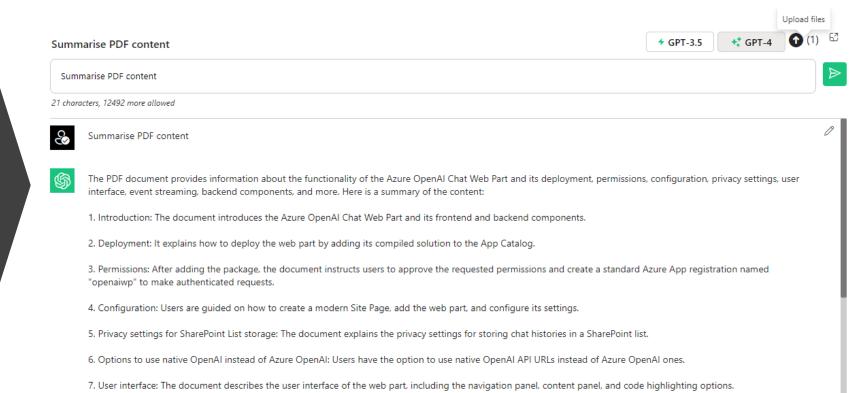


Date and time are...



The current date is November 10, 2023, and the current time is 12:02:22. If you have any more questions or need further assistance, feel free to ask!

# Upload and Summarise PDF content

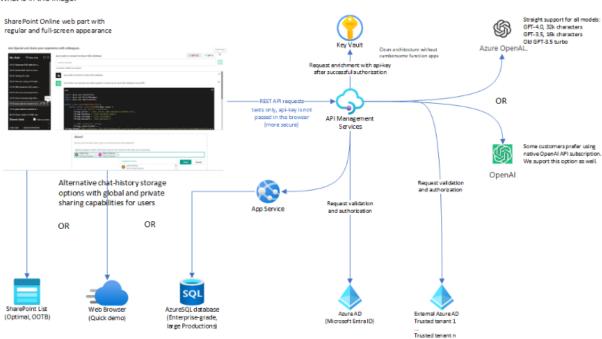


# Using GPT-4 Vision for Image Analysis: a Technical Diagram

#### What is in this image?



What is in this image?





The image appears to be a flowchart or architectural diagram relating to a software or web application. It includes various components and services that interact with each other to support the application's functionality. Here are the components and descriptions visible in the diagram:

- 1. \*\*SharePoint Online web part\*\*: The image at the top left shows a SharePoint Online web part that can be displayed with both regular and full-screen appearance. This is likely a user interface component for displaying content.
- 2. \*\*API Management Services\*\*: Positioned in the center-right of the image, this service seems to handle REST API requests, request validation, and authorization, acting as a gateway between clients and backend services.
- 3. \*\*App Service\*\*: A central component on the left side of the diagram, identified with the Azure logo, which suggests that it's an Azure App Service used to host web applications.
- 4. \*\*Key Vault\*\*: Shown linking to the API Management Services and marked with text indicating that it enriches requests with an API key after successful authorization, which implies security and configurations management.
- 5. \*\*OpenAl\*\*: Mentioned on the right side of the image with a note that some customers prefer using their OpenAl subscription, indicating integration with Al services provided by OpenAl.
- 6. \*\*Azure AD (Microsoft Entral ID)\*\* and \*\*External Azure AD\*\*: Components for identity and access management.
- 7. \*\*AzureSQL database (Enterprise-grade, large Productions)\*\*: A cloud-based database service indicated for production-grade, larger-scale usage.
- 8. \*\*Storage options\*\*: At the bottom left, there are three alternatives presented for chat-history storage: SharePoint List, Web Browser (Quick demo), and AzureSQL database.

The image also contains annotations related to support for different GPT models, such as GPT-4.0, and the mention of secure transmission of API keys. Overall, the diagram seems to describe a web application architecture that leverages Azure cloud services and offers flexibility in terms of AI integration and user history storage.

# Using GPT-4 Vision for Image Analysis: a Photo

What is in this image? Can you recognize this place?

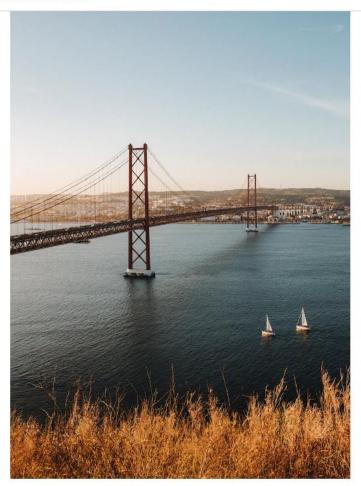
Send a message

\*\* GPT-4

\*\* GPT-3.5

\*\* GPT-4

0 characters, 15000 more allowed





This image features the 25 de Abril Bridge in Lisbon, Portugal. You can recognize it by its distinctive red color, similar in style to the Golden Gate Bridge in San Francisco, USA. The bridge spans the Tagus River, and in this image, you can also see a dry, grassy foreground that gives a golden hue to the lower part of the photograph. Additionally, there are two sailboats visible on the water, providing a sense of leisure and maritime activity. The sky is clear, which suggests that the photo was taken on a day with good weather.

# Azure OpenAI Chat web part for SharePoint Online, configurable options

Azure OpenAl Chat ×	Azure OpenAl Chat ×	Azure OpenAl Chat $\qquad \qquad \times$	Azure OpenAl Chat $\qquad \qquad \times$
Settings	Settings	Settings	Settings
Client ID: create a user_impersonation app with name=openaiwp	Client ID: create a user_impersonation app with name=openaiwp	Client ID: create a user_impersonation app with name=openaiwp	Client ID: create a user_impersonation app with name=openaiwp
98765432-1234-5678-9876-543210123456	98765432-1234-5678-9876-5432101234	98765432-1234-5678-9876-5432101234	98765432-1234-5678-9876-5432101234
Base URL for GPT endpoint (APIM API or full)	Base URL for GPT endpoint (APIM API or full)	Base URL for GPT endpoint (APIM API or full)	Base URL for GPT endpoint (APIM API or full)
https://tenant.azure-api.net/openai	https://tenant.azure-api.net/openai	https://tenant.azure-api.net/openai	https://tenant.azure-api.net/openai
Base URL for GPT4 endpoint (APIM API or full)	Base URL for GPT4 endpoint (APIM API or full)	Base URL for GPT4 endpoint (APIM API or full)	Base URL for GPT4 endpoint (APIM API or full)
https://tenant.azure-api.net/openai4	https://tenant.azure-api.net/openainative	https://tenant.azure-api.net/openainative	https://api.openai.com/v1/chat/completior
Base URL for Chat WebApi (APIM API or full)	Base URL for Chat WebApi (APIM API or full)	Base URL for Chat WebApi (APIM API or full)	Base URL for Chat WebApi (APIM API or full)
		Optional api-key for Azure OpenAl (for troubleshooting, not for Production)	
Optional api-key for Azure OpenAI (for troubleshooting, not for Production)	Optional api-key for Azure OpenAI (for troubleshooting, not for Production)		Optional api-key for Azure OpenAI (for troubleshooting, not for Production)
		Language models	亲亲有亲亲
Language models	Language models	gpt-35-turbo-16k,gpt-4-1106-preview	Language models
GPT-3.5	gpt-35-turbo-16k,gpt-4-1106-preview	Storage type for chat history  SharePoint list	gpt-35-turbo-16k,gpt-4-1106-preview
GPT-4	Storage type for chat history	SharePoint list URL (leave it empty for	Storage type for chat history
Storage type for chat history	Database V	default URL)	Local storage V
Database			
Enable sharing	Enable sharing	Create	Enable sharing (demo only)
Enable streaming	Enable streaming	✓ Enable sharing	✓ Enable streaming
Enable full screen mode	Enable full screen mode	✓ Enable streaming	Enable full screen mode
Enable integrations	Enable integrations	✓ Enable full screen mode	Enable integrations
Code highlighting	✓ Code highlighting	✓ Enable integrations	Code highlighting
Show highlighting styles	Show highlighting styles	Code highlighting	Show highlighting styles
Default style	Default style	✓ Show highlighting styles	Default style
stackoverflowDark ∨	stackoverflowDark ∨	Default style	stackoverflowDark ~
Show prompt area at bottom	Show prompt area at bottom	stackoverflowDark	Show prompt area at bottom
Unlimited chat history length (Al-	Unlimited chat history length (Al-	Show prompt area at bottom	Unlimited chat history length (Al-
responses in long chats may be less accurate)	responses in long chats may be less accurate)	Unlimited chat history length (Al- responses in long chats may be less	responses in long chats may be less accurate)
Locale for dates (default is fi-FI)	Locale for dates (default is fi-FI)	accurate)  Locale for dates (default is fi-FI)	Locale for dates (default is fi-FI)
		Locale for dates (default is II-11)	