

Integration of Cohere and Weaviate

Using Python for Dense Retrieval and Reranking

API Initialization

1. Initialize Cohere client:

- - ``co = cohere.Client(COHERE_API_KEY)``

2. Initialize Weaviate v3 client:

- - Provide API URL and keys.
- - Set additional headers for integration.

Utility Functions Overview

1. Dense Retrieval Function:

- - ``def dense_retrieval(query, client):``
- - Simulates retrieving documents.

2. Keyword Search Function:

- - ``def keyword_search(query, client, properties, num_results):``
- - Simulates search for relevant properties.

Printing Results

Function: ``print_result(results)``

- 1. Loops through retrieved results.
- 2. Prints each result in a readable format.

Reranking Responses

Function: ``rerank_responses(query, responses, num_responses=10)``

- 1. Uses Cohere Rerank API.
- 2. Reranks documents based on relevance.
- 3. Returns top N responses.

Example Execution Flow

1. Query: `What is the capital of Canada?`
2. Dense Retrieval:
 - - Simulates retrieving example documents.
3. Reranking:
 - - Applies Cohere's rerank model.
4. Outputs top-ranked responses.