

# HR Chatbot

## for Human Resource Policies of the Government of B.C.

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## **Background**

In every organization, employees frequently call HR department about various HR policy questions related to compensation, leave of absence, health and safety, privacy, employment standards, etc.




























The HR staff depend on the organization's HR policy documents to answer any queries. This is an area where AI chatbots can make a meaningful impact. We choose to implement a HR chatbot to modernize employee experience and streamline HR processes.

## Data Gathering

We searched the Internet for public human resource policy documents. There are many available documents from Canadian resources. For example,

- [The Government of British Columbia](#)
- [The Government of Prince Edward Island](#)
- [Archery Canada](#)
- [University of Toronto](#)

The HR policy documents of the Government of B.C are picked for our project since they are of the proper size – 24 pdf files plus appendices with total of less than 3 MB disk space. They are very high quality data and no cleaning is needed.

 01_hiring_and_deployment_policy.pdf	 23_appendix_02_due_process_checklist_excl.pdf
 02_learning_and_development_policy.pdf	 23_appendix_03.pdf
 04_occupational_safety_and_health_policy.pdf	 23_appendix_04_roles_responsibilities.pdf
 05_managing_health_related_absences_policy.pdf	 23_termination_with_just_cause_excl_incl.pdf
 06_job_evaluation_policy.pdf	 24_public_interest_disclosure_policy.pdf
 07_pay_benefits_and_leave_policy.pdf	 appendix_1_travel_allowances.pdf
 08_termination_of_employment_of_excluded_employees_policy.pdf	 hr_policy_11_discrimination_bullying_and_harassment_in_the_workplace.pdf
 09_standards_conduct_policy.pdf	 standards_of_conduct_political_staff.pdf
 10_volunteers_from_outside_the_bc_public_service_policy.pdf	
 13_post_employment_restrictions.pdf	
 14_security_screening_policy.pdf	
 15_relocation_policy.pdf	
 17_appendix_02_parking_for_travel_policy.pdf	
 17_travel_policy.pdf	
 18_statutory_holidays_-_excluded_employees_policy.pdf	
 19_leave_for_preparing_to_adapt_excluded_employees_policy.pdf	
 20_policy_stat_hol_day_pay_excl_empl.pdf	
 21_policy_approve_payout_vac_leave.pdf	
 23_appendix_01_due_process_checklist_incl.pdf	

## **Models**

Chat completion: gpt-4.1

Embedding model: text-embedding-3-large

## **Services**

Azure AI Foundry

Azure OpenAI Service

AI Search Service

AI Services

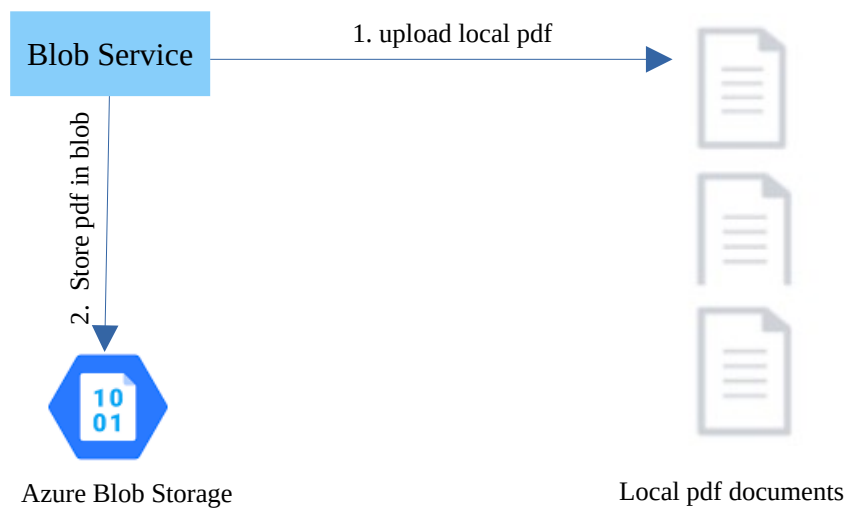
Blob Storage Account

## Data Ingestion

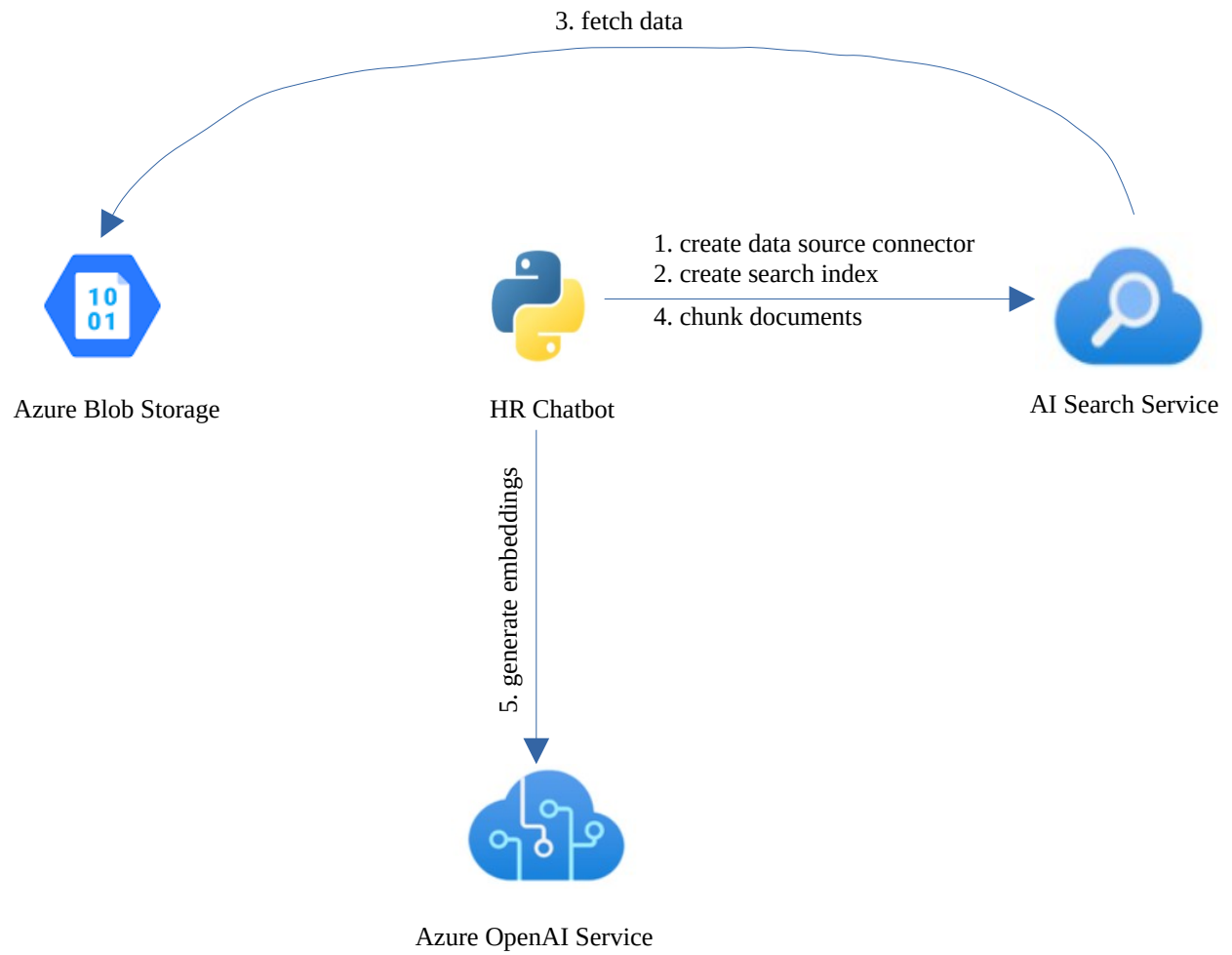
We use the integrated vectorization feature in Azure AI Search. Integrated vectorization takes care of document format cracking, data extraction, chunking, vectorization, and indexing.

The data ingestion process is implemented in the module *load\_data\_create\_index.py*.

### 1. Upload pdf documents to Azure Blob Storage

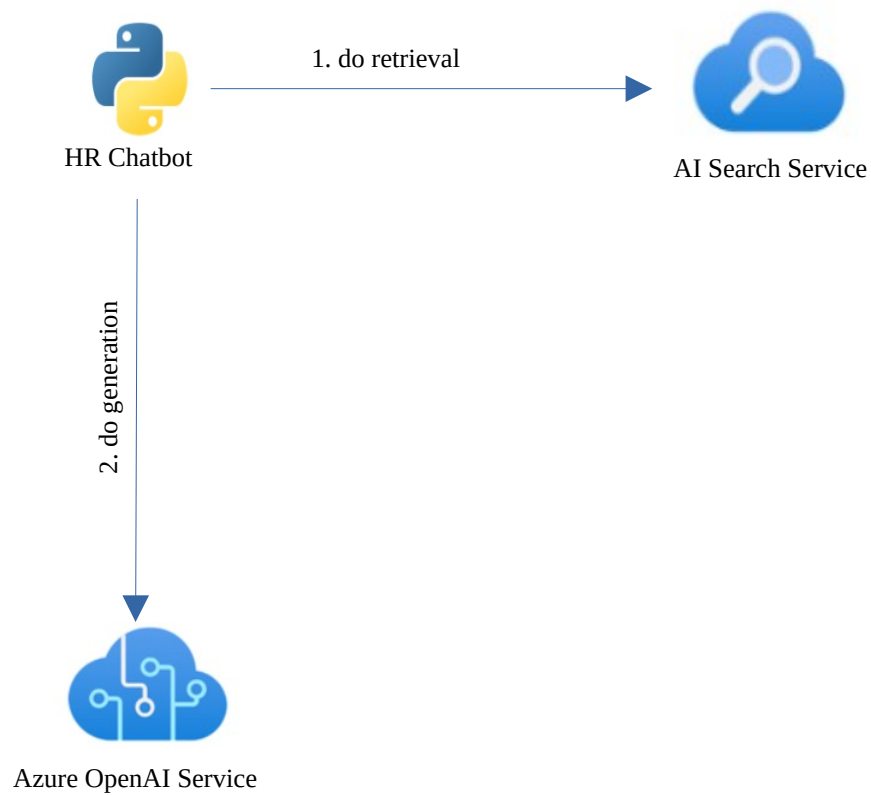


## 2. Chunk documents and generate embeddings



## Retrieval and Generation

The RAG process is implemented in the module *retrieval\_generation.py*.



## HR Chatbot

Currently HR Chatbot supports command line only.

HR Chatbot consists of three modules:

`main.py`

`load_data_create_index.py`

*`retrieval_generation.py`*

The main module invokes `load_data_create_index()` and then in a while loop, it takes the user query and invokes *`retrieval_generation(user_input)`*.



## Demo

### Sample questions:

1. What will an organization of the Government of British Columbia do if an employee got health problems?
2. Which HR policy document talks about occupational safety and health?
3. What is the role of political staff?

```
(azure) C:\research\github\azure-openai-advanced\HR-chatbot>python -m hrchatbot.main  
Just a second... HR Chatbot is preparing to answer your questions.
```

```
Question: What will an organization of the Government of British Columbia do if an employee got health problems?
```

```
Answer: If an employee of an organization within the Government of British Columbia develops health problems, the organization will:
```

- Offer modified duties and workplace accommodations to support the employee.
- Provide work assignments within alternative work units and/or locations if needed, to help avoid or minimize the duration of the employee's absence.
- Use case management planning and return-to-work strategies, with the goal of helping the employee return to productive work in a safe, timely, and sustainable manner.
- Work together with the BC Public Service Agency and use the integrated disability case management program to manage the situation.
- Communicate attendance expectations to the employee and take appropriate action if absences become an issue.

```
These steps are intended to ensure a safe and healthy workplace and support the well-being of employees.
```

```
Question: Which HR policy document talks about occupational safety and health?
```

```
Answer: The HR policy document that talks about occupational safety and health is HR Policy 04 - Occupational Safety and Health.
```

```
Question: exit  
Goodbye!
```

## Q & A