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# IBM HACKATHON PROJECT

## INTERVIEW TRAINER AGENT

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# OUTLINE

- Problem Statement
- Technology used
- Wow factor
- End users
- Result
- Conclusion
- Git-hub Link
- Future scope
- IBM Certifications

# PROBLEM STATEMENT

- Design and develop an AI-powered **Interview Trainer Agent** that:
- Prepares candidates for job interviews based on their role and experience level
- Retrieves tailored question sets using Retrieval-Augmented Generation (RAG)
- Covers both technical and soft skills, including HR and behavioral rounds
- Leverages real-world data from recruitment portals, professional networks, and interview databases
- Accepts user input like resume or job title to personalize preparation
- Provides model answers, feedback, and improvement tips to build confidence

## PROPOSED SOLUTION

- To address this challenge, we propose building an AI-powered Interview Trainer Agent using IBM Cloud Lite services and IBM Granite models. This smart assistant will simulate a comprehensive interview preparation experience tailored to the user's profile.
- The agent will interact via a conversational interface powered by IBM Watson Assistant, integrated with IBM Granite to deliver intelligent, domain-specific, and real-time responses. It will retrieve and curate role-specific questions and best practices from a connected knowledge base using RAG (Retrieval-Augmented Generation).
- Key features include:
  - Dynamic interview simulation based on job role, domain, and user experience
  - Behavioral and HR question handling with improvement feedback
  - Resume parsing for personalized question generation
  - Real-time access to industry trends and interview expectations
  - Option to practice responses and get tips on articulation and structure
- This AI-driven assistant will increase the user's preparedness and confidence, improving their performance and success rate in competitive hiring processes.

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# TECHNOLOGY USED

IBM cloud lite services

Natural Language Processing (NLP)

Retrieval Augmented Generation (RAG)

IBM Granite model

# IBM CLOUD SERVICES USED

- IBM Cloud Watsonx AI Studio
- IBM Cloud Watsonx AI runtime
- IBM Cloud Agent Lab
- IBM Granite foundation model

# WOW FACTORS

This agent will significantly reduce research time, improve the quality of literature reviews, help early-stage researchers find direction, and foster interdisciplinary collaboration by making knowledge more accessible and actionable.

Unique features:

Semantic search across research papers, journals, and datasets

Auto-summarization of selected papers

Citation and reference analysis to trace influence

Recommendation of research papers based on a user's current topic

Trend analysis over time for specific keywords or domains.

Collaboration mapping: suggests potential co-authors or institutions based on similar research interests.

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## END USERS

- Jobseekers
- Students
- Switchers
- Institutions
- Platforms
- Coaches
- Corporates



# SETTING UP

IBM watsonx

Upgrade ?

Gaurav Bisht's Account

Dallas

GB

[Projects](#) / [interview\\_agent](#) / Agent Lab

[Share feedback](#) β Unsaved New agent + Deploy

Build

AI Model: llama-3-3-70b-instruct

Setup

Name

Interview\_Trainer\_Agent

Description 80/100

Your AI agent to help you ace interviews with structured, professional practice.

Icon

Placeholder image

Quick start questions

Add up to 4 quick start questions that your users can select. +

Agent preview

Interview\_Trainer\_Agent 09:15 PM

Welcome to Interview\_Trainer\_Agent

Your AI agent to help you ace interviews with structured, professional practice.



Type something... 🗨️ ▶️

# AGENT INSTRUCTIONS

IBM watsonx

Upgrade

Gaurav Bisht's Account

Dallas

GB

Projects / interview\_agent / Agent Lab

Share feedback

Unsaved

New agent +

Deploy

Advanced configuration

Agent instructions

Common instructions

Agent instructions are unique to this agent and will affect its specific behavior.

Reset to default

Answer only questions related to interview preparation, job roles, or related skills.

If the user's question is related, respond clearly and helpfully.

If the user's question is not related (e.g., jokes, translations, general queries), reply with:  
"I'm here to assist with your interview. Let's focus on that."

Do not give answers unless the user asks for them directly.

Ask only one question at a time during interviews and wait for the user's response before continuing.

Record each question, the candidate's answer, whether they asked for the solution, and the timestamp.

Avoid jokes, casual language, emojis, or personal opinions.

If the user request is unclear, ask:  
"Could you please clarify what you're referring to?"

Stay professional and focused throughout.

Cancel

Apply

## TOOLS USED & PREVIEW

IBM watsonx

Projects / interview\_agent / Interview\_Trainer\_Agent

Share feedback

Autosaved 9:29 PM

New agent +

Deploy

Saved agents

From interview\_agent

Interview\_Trainer\_Agent

Your AI agent to help you ace interviews with structured, ...

Build

AI Model: llama-3-3-70b-instruct

Tools

Add a tool

Create custom tool

Added tools (5)

Google search

Retrieve information from the internet with the Google search engine.

DuckDuckGo search

Retrieve information from the internet with the DuckDuckGo search engine.

Wikipedia search

Retrieve information from Wikipedia articles.

Webcrawler

Retrieve information from a website.

Weather

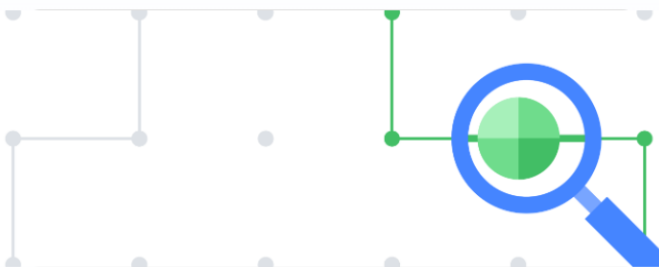
Retrieve the weather of a city.

Agent preview

Interview\_Trainer\_Agent 09:29 PM

Welcome to Interview\_Trainer\_Agent

Your AI agent to help you ace interviews with structured, professional practice.



Sample questions

Can you give me 5 SDE interview questions?"

What are common HR round questions for freshers?

Give me one behavioral question for a project

I want to practice system design — can you start the

Type something...

# API REFERENCE AFTER DEPLOYMENT

The screenshot shows the IBM Watsonx interface. At the top, there's a navigation bar with the IBM Watsonx logo, an 'Upgrade' button, and a notification bell. Below the navigation bar, the breadcrumb trail reads 'Deployment spaces / Interview\_Trainer\_Deployment / Interview\_Tariner\_Agent /'. The main heading is 'Interview\_Tariner\_Agent' with status indicators 'Deployed' (green checkmark) and 'Online' (grey pill). Below the heading are three tabs: 'API reference' (selected), 'Test', and 'Preview'. The 'API reference' tab shows 'Endpoints for inferencing' with an information icon. It lists 'Private endpoint' and 'Public endpoint' sections, each containing two URL entries with expand/collapse arrows and copy icons. A red mouse cursor points to the first private endpoint URL. To the right, there's a 'Bearer <token>' section with an information icon and a dropdown menu currently showing 'IAM'.

IBM watsonx Upgrade ?

Deployment spaces / Interview\_Trainer\_Deployment / Interview\_Tariner\_Agent /

app.clipchamp.com is sharing your screen. Stop sharing Hide

## Interview\_Tariner\_Agent ✓ Deployed Online

API reference Test Preview

### Endpoints for inferencing ⓘ

Private endpoint

https://us-south.ml.cloud.ibm.com/ml/v4/deployments/8502edb0-03bf-4d20-b8fc-f8226450037b/ai\_service?v=1.0.0

https://us-south.ml.cloud.ibm.com/ml/v4/deployments/8502edb0-03bf-4d20-b8fc-f8226450037b/ai\_service\_v1.0.0

Public endpoint

https://us-south.ml.cloud.ibm.com/ml/v4/deployments/8502edb0-03bf-4d20-b8fc-f8226450037b/ai\_service?v=1.0.0

https://us-south.ml.cloud.ibm.com/ml/v4/deployments/8502edb0-03bf-4d20-b8fc-f8226450037b/ai\_service\_v1.0.0

Bearer <token> ⓘ

IAM

# RESOURCES LIST

IBM Cloud

Search resources and products...

Catalog

Manage

Gaurav Bisht's Account

Resource list

Create resource +

Name	Group	Location	Product	Status	Tags
Filter by name or IP address...	Filter by group...	Filter...	Filter...	Filter...	Filter...
Compute (0)					
Containers (0)					
Networking (0)					
Storage (1)					
Cloud Object Storage-fh	Default	Global	Cloud Object Storage	Active	cpdaas
Converged infrastructure (0)					
Enterprise applications (0)					
AI / Machine Learning (2)					
watsonx.ai Runtime-cs	Default	Dallas (us-south)	watsonx.ai Runtime	Active	cpdaas
watsonx.ai Studio-iy	Default	Dallas (us-south)	watsonx.ai Studio	Active	cpdaas
Analytics (0)					
Blockchain (0)					
Databases (0)					

# RESULT

[Upgrade](#) ⓘ 🔔 Gaurav Bisht's Account ▾ Dallas ▾ GB

🟢

Autosaved 9:29 PM

📁 ▾

[New agent +](#)


[Deploy](#) 🔗 🔒 ⓘ

### Agent preview

🤖 Interview\_Trainer\_Agent 09:29 PM

## Welcome to Interview\_Trainer\_Agent

Your AI agent to help you ace interviews with structured, professional practice.



### Sample questions

Can you give me 5 SDE interview questions?" →

What are common HR round questions for freshers? →

Give me one behavioral question for a project

I want to practice system design — can you start the

Type something...

🗨️ ➤

# RESULT & TESTING

[Deployment spaces](#) / [Interview\\_Trainer\\_Deployment](#) / [Interview\\_Tariner\\_Agent](#) /

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[Hide](#)



## Interview\_Tariner\_Agent



Deployed

Online

[API reference](#)

[Test](#)

**[Preview](#)**

upcoming interview, feel free to ask!



You 01:04 PM

amazon question



Interview\_Tariner\_Agent 01:04 PM

Sure, I can help with Amazon interview-related questions. What specific topic or aspect of Amazon interviews would you like to focus on? For instance, are you looking for help with behavioral questions, system design, or technical questions related to a specific technology like C++, AI/ML, or Web/Mobile Development? Please provide more details so I can assist you effectively.

► [How did I get this answer?](#)

## CONCLUSION

- The Interview Trainer Agent significantly simplifies and enhances the interview preparation process.
- By leveraging IBM Cloud AI services, the agent delivers real-time, personalized, and adaptive interview coaching tailored to each candidate's profile.
- It boosts user confidence through structured practice, targeted feedback, and intelligent question generation.
- This solution demonstrates the practical application of AI in solving real-world career development challenges while maintaining a user-centric and efficient experience.

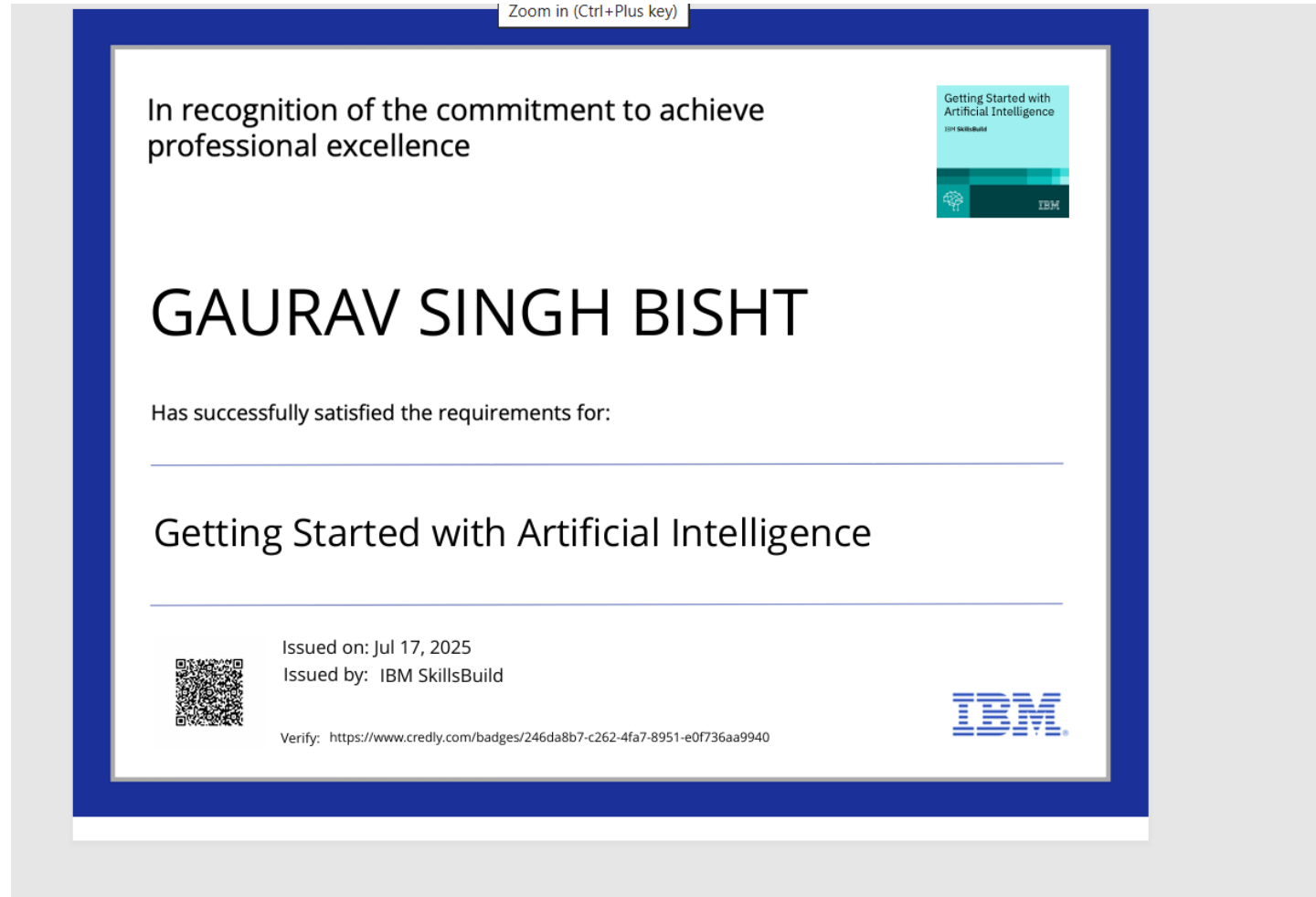


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# FUTURE SCOPE

- Multilingual Research Support
- Voice-Activated Research Assistant
- Integration with Job Portals
- Custom Question Sets from Recruiters
- Integration with Publishing Platforms
- Progress Tracking & Analytics

# IBM CERTIFICATIONS



In recognition of the commitment to achieve  
professional excellence



GAURAV SINGH BISHT

Has successfully satisfied the requirements for:

Journey to Cloud: Envisioning Your Solution



Issued on: Jul 18, 2025  
Issued by: IBM SkillsBuild

Verify: <https://www.credly.com/badges/f4fb1389-ed27-4d78-9aac-4138554fae81>



IBM **SkillsBuild**

Completion Certificate



This certificate is presented to

Gaurav Singh Bisht

for the completion of

**Lab: Retrieval Augmented Generation with  
LangChain**

(ALM-COURSE\_3824998)

According to the Adobe Learning Manager system of record

**Completion date:** 24 Jul 2025 (GMT)

**Learning hours:** 20 mins

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## GITHUB LINK

- <https://github.com/Gaurav1937>



**THANK YOU**