

IBM HACKATHON PROJECT

INTERVIEW TRAINER AGENT

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For Women – Computer Science And Engineering**

OUTLINE

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PROBLEM STATEMENT

- Job seekers often feel unprepared for interviews because they don't know:
- What types of questions will be asked
- What kind of answers interviewers expect
- How to build confidence and improve soft skills
- Even experienced candidates struggle to tailor their preparation based on different job roles, companies, or levels of experience.

TECHNOLOGY USED

- IBM Cloud (Lite Services)
- IBM Watsonx.ai Runtime
- Retrieval-Augmented Generation (RAG)
- Vector Indexing
- IBM Granite

IBM CLOUD SERVICES USED

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

WOW FACTORS

- Personalized Q&A based on job title (e.g. “Java Developer – Fresher”)
- Pulls content from uploaded docs like InterviewTips, RoleQnA, etc.
- Can behave like a chatbot for live practice
- Offers both technical and behavioral questions
- Uses IBM’s Granite model for real-time, contextual answers
- Auto-generates suggestions for improvement

END USERS

- Freshers applying for internships and jobs
- Final year students preparing for campus placements
- Professionals switching domains (e.g. from Testing to DevOps)
- Training institutes and interview coaching centers

RESULTS

The screenshot displays the IBM watsonx Agent Lab interface. The browser address bar shows the URL: `au-syd.dai.cloud.ibm.com/wx/agents?context=wx&project_id=3df6b504-58c9-42ec-a0ea-132f9dc4f023`. The page header includes the IBM watsonx logo, an 'Upgrade' button, a user profile for 'Karthika Bondalapati's Ac...', and location settings for 'Sydney'. The main navigation bar shows 'Projects / InterviewTrainerAgent / Agent Lab' and buttons for 'Share feedback', 'Unsaved', 'New agent +', and 'Deploy'.

The interface is divided into two main sections: 'Build' and 'Agent preview'.

Build Section:

- Configuration:** Includes a 'Framework' dropdown set to 'LangGraph' and an 'Architecture' dropdown set to 'ReAct'.
- Instructions:** A text box contains the instruction: "You are a helpful assistant that uses tools to answer questions in detail. When greeted, say 'Hi, I am watsonx.ai agent. How can I help you?'". A link for 'Advanced configuration' is visible.
- Knowledge:** A 'Vector index' dropdown is set to 'Trainer agent for interview'. A note below states: "A vector index searches documents for relevant information to ground the model. Upload the files to index or select an existing index."
- Tools:** A section for defining tools, currently empty.

Agent preview Section:

- Shows a message from 'watsonx Agent 05:47 PM' with the text: "Welcome to watsonx Agent. Change this description to reflect your particular agent".
- Below the message is a diagram of a graph-based agent architecture with nodes and connecting lines.
- At the bottom is a text input field labeled 'Type something...' with a send button.

The Windows taskbar at the bottom shows the system clock as 17:48 on 03-08-2025, with a temperature of 31°C and 'Partly sunny' weather.

RESULTS

The screenshot displays the IBM watsonx Agent Lab interface. The top navigation bar includes the IBM watsonx logo, an 'Upgrade' button, a user profile for 'Karthika Bondalapati's Ac...', and location settings for 'Sydney'. The main interface is divided into two panels: 'Build' on the left and 'Agent preview' on the right.

Build Panel:

- Setup:** Includes a dropdown for 'Model: mistral-large'.
- Configuration:**
 - Framework:** A dropdown menu currently showing 'LangGraph'.
 - Architecture:** A dropdown menu currently showing 'ReAct'.
 - Instructions:** A text area containing the instruction: 'You are a helpful assistant that uses tools to answer questions in detail.' A link for 'Advanced configuration' is visible.
 - Knowledge:** A section with a 'Vector index' dropdown showing 'Trainer agent for interview' and a 'Clear chat' button. A note below states: 'If you want to add a vector index to the agent, clear the agent preview chat.'
 - Tools:** A section at the bottom of the configuration panel.

Agent preview Panel:

- Shows a chat history with two messages:
 - User:** 'I'm a fresher software developer. Ask me 3 technical questions.'
 - watsonx Agent:** 'Here are 3 technical questions for a fresher software developer:
 - 1. What are the four pillars of OOP?
 - 2. Explain the difference between Java and Python.
 - 3. What is a data structure? Name some types.'
- Below the chat history is a 'How did I get this answer?' section with a refresh icon.
- At the bottom is a text input field with the placeholder 'Type something...' and a send button.

The bottom of the image shows a Windows taskbar with various application icons, a search bar, and system status indicators including 'Humid Now', 'ENG IN', and the date '03-08-2025'.

RESULTS

The screenshot displays the IBM watsonx Agent Lab interface. The top navigation bar includes the IBM watsonx logo, an 'Upgrade' button, a user profile for 'Karthika Bondalapati's Ac...', location 'Sydney', and a 'KB' icon. The main header shows the project path 'Projects / InterviewTrainerAgent / Agent Lab' and buttons for 'Share feedback', 'Unsaved', 'New agent', and 'Deploy'.

The 'Build' section on the left contains the following components:

- Model:** mistral-large
- Framework:** LangGraph
- Architecture:** ReAct
- Instructions:** You are a helpful assistant that uses tools to answer questions in detail. (with a link to 'Advanced configuration')
- Knowledge:** A vector index containing 'Trainer agent for interview' (with a 'Clear chat' link).
- Tools:** (empty section)

The 'Agent preview' section on the right shows a chat history:

- User:** You: 05:58 PM. Question: "What should I include in my self-introduction for an interview?"
- Agent:** watsonx Agent 05:58 PM. Response: **What to Include in Your Self-Introduction for an Interview**. A well-crafted self-introduction can set the tone for the rest of your interview. Here are some key elements to include:
 - 1. Greeting and Introduction**
 - Start with a polite greeting and introduce yourself by name.
 - Example: "Good morning/afternoon, I'm [Your Name]."
 - 2. Educational Background**
 - Mention your highest degree and the institution you attended.
 - Example: "I recently graduated with a Bachelor's degree in Computer Science from [University Name]."
 - 3. Professional Experience**

At the bottom of the chat is a text input field with the placeholder 'Type something...' and a send button.

RESULTS

Deployed AI Agent

The screenshot displays the IBM Watsonx Agent web interface. The top navigation bar includes the IBM Watsonx logo, an 'Upgrade' button, and user information for 'Karthika Bondalapati's Account' in 'Sydney'. The main content area shows the 'watsonx Agent' deployment status as 'Deployed' and 'Online'. Below this, there are tabs for 'API reference', 'Test', and 'Preview', with 'Preview' being the active tab. A chat window is open, showing a conversation where the user asks for interview questions for an HR-manager, and the agent responds with a list of technical questions. The right sidebar provides details about the deployment, including the name 'watsonx Agent', a description, deployment ID, serving name, software and hardware specifications, and associated assets.

Deployment spaces / InterviewAgent / watsonx Agent /

watsonx Agent Deployed Online

API reference Test **Preview**

New chat +

You 06:47 PM
give me the interview questions for HR-manager

watsonx Agent 06:47 PM
Hi, I am watsonx.ai agent. How can I help you?
Here are some interview questions for an HR Manager:
HR Manager Interview Questions
Technical Questions
1. What are the key responsibilities of an HR Manager?
2. How do you handle employee relations issues?
3. Please offer your suggestions with commitment and motivational responses.

Type something...

About this deployment

Name
watsonx Agent

Description
Change this description to reflect your particular agent

Deployment Details
Deployment ID: f11f3754-f225-4500-ae65-164da11aa05a
Serving name:
No serving name.
Software specification:
runtime-24.1-py3.11
Hardware specification:
Extra extra small: 1 CPU and 2 GB RAM
Copies:
1

Tags
wa-agent

Associated asset
watsonx Agent
6b37a98c-5a0b-4a5c-b75d-4d8cc241d47a

CONCLUSION

- The Interview Trainer Agent uses IBM Watsonx.ai and RAG to help users prepare for interviews by answering HR, technical, and resume-related queries. It offers smart, real-time support through a vector-based knowledge system deployed on IBM Cloud.

FUTURE SCOPE

- Add voice-based interaction for a more natural experience
- Provide personalized feedback based on user responses
- Integrate real-time job market trends and data
- Support multiple languages for wider accessibility
- Include mock interview simulations using advanced AI
- Track user progress and suggest improvement areas
- Enable integration with resume-building and job portals

IBM CERTIFICATIONS

In recognition of the commitment to achieve
professional excellence



kaarthika bondalapati

Has successfully satisfied the requirements for:

Getting Started with Artificial Intelligence



Issued on: Jul 15, 2025
Issued by: IBM SkillsBuild

Verify: <https://www.credly.com/badges/f91381af-9016-4990-af76-107bd968d518>



7/24/25, 8:02 PM

Completion Certificate | SkillsBuild

IBM **SkillsBuild**

Completion Certificate



This certificate is presented to
kaarthika bondalapati

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

GITHUB LINK

GitHub Repository Link :

https://github.com/Kaarthika-0927/Interview_Trainer_Agent



THANK YOU