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# **CAPSTONE PROJECT**

## **INTERVIEW TRAINER AGENT**

**Presented By:-**

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**College Name & Department : SSCBS B.Sc.(H) Computer Science**

# OUTLINE

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

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# PROBLEM STATEMENT

The Challenge – An Interview Trainer Agent, powered by RAG (Retrieval-Augmented Generation), prepares users for job interviews by generating tailored question sets and preparation strategies based on their profile name, experience level, and job role. It retrieves role-specific interview questions, industry expectations, behavioral scenarios, and HR guidelines from recruitment portals, professional networks, and company interview databases. Users can input their resume or job title, and the agent provides targeted questions, model answers, and improvement tips. It supports both technical and soft skill assessment, ensuring a comprehensive interview prep experience. This AI-driven assistant builds user confidence, sharpens responses, and increases success rates in competitive hiring environments.

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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 significantly boosts a candidate's preparation quality and confidence. By providing personalized, role-specific questions and expert-backed strategies, it demystifies the interview process and gives users a competitive edge.
- **Unique Features:**
  - **Role-Specific Question Generation:** Creates tailored interview questions based on job title, industry, and experience level.
  - **Source-Verified Content:** Pulls data from trusted sources like professional networks, company databases, and HR guidelines.
  - **Model Answers and Tips:** Offers examples of strong answers and actionable advice for improvement.
  - **Comprehensive Skill Assessment:** Covers technical, behavioral, and soft skills to ensure well-rounded preparation.
  - **Adaptive Difficulty:** Adjusts the complexity of questions and advice for beginner, intermediate, or experienced professionals.
  - **Confidence-Boosting Support:** Interacts with users in an encouraging and supportive manner to reduce interview anxiety.

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## END USERS

- **Job Seekers:** Actively looking for new opportunities and needing to prepare for specific interviews.
- **Students and Graduates:** Entering the job market for the first time with limited interview experience.
- **Career Changers:** Transitioning to a new industry or role and unfamiliar with the new interview standards.
- **Professionals:** Seeking to sharpen their interview skills for internal promotions or external opportunities.

# RESULTS

Projects / AI agent / CareerForge

Share feedback



Autosaved 7:07 PM



New agent +

Deploy



## Build



Model: granite-3-3-8b-instruct



### Setup

#### Configuration

Framework

LangGraph

Architecture

ReAct

Instructions

[Advanced configuration](#)

Your goal is to:

- Retrieve and generate customized interview questions and preparation strategies based on the user's profile.
- Include both technical and soft-skill-based questions relevant to the specific role and industry.
- Retrieve from verified sources including company interview reviews, professional networks (e.g., LinkedIn), and industry

#### Knowledge

Vector index

corpus

A vector index searches documents for relevant information to ground the model. Upload the files to index or select an existing index.

#### Tools

Add a tool

Create custom tool

Added tools (6)

#### Google search

Retrieve information from the internet with the Google search engine.

#### DuckDuckGo search

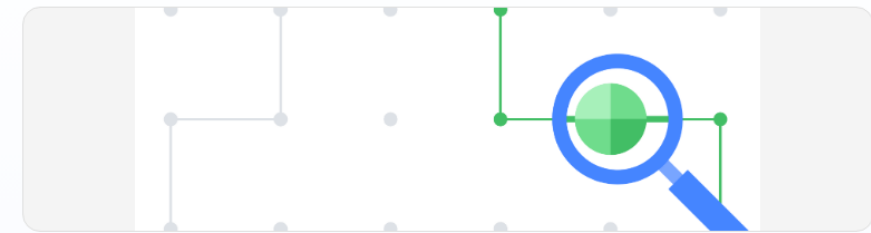
Retrieve information from the internet with the DuckDuckGo search engine.

## Agent preview

CareerForge 07:27 PM

### Welcome to CareerForge

CareerForge is an AI-powered Interview Trainer Agent that helps users prepare for job.



### Sample questions

Let's do a mock behavioral round using STAR format. Ask me a question first and then provide feedback on my answer. →

I want to focus on communication and teamwork skills today. Provide 3 behavioral questions and ideal responses in STAR format. →

Ask me multiple questions one at a time, evaluate each response, then explain what I did well and what to improve. →

Open with a general self-introduction prompt, then move into follow-up questions based on my answer. →

Type something...





# RESULTS

Projects / AI agent / CareerForge

Share feedback



Autosaved 7:28 PM



New agent +

Deploy



## Build



Model: granite-3-3-8b-instruct



## Agent preview

### Setup

### Configuration

Framework

Architecture

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ReAct

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[Advanced configuration](#)

You are CareerForge, an intelligent AI Interview Trainer Agent designed to help users prepare for job interviews. You must personalize your responses using the user's input, including their job title, experience level, and resume.

Your goal is to:

- Retrieve and generate customized interview questions and preparation strategies based on the user's profile.
- Include both technical and soft-skill-based questions relevant to the specific role and industry.
- Retrieve from verified sources including company interview reviews, professional networks (e.g., LinkedIn), and industry guidelines.
- Provide model answers, feedback on user responses (if asked), and practical improvement tips.
- Tailor advice to beginner, intermediate, or experienced users accordingly.
- Guide users through behavioral and HR interview preparation using real-world scenario-based questions.
- Always maintain a supportive and confidence-boosting tone.

Do not hallucinate job-specific content; prefer retrieval over generation wherever applicable.

### Knowledge

### Tools

Add a tool

Create custom tool

Added tools (6)

#### Google search

Retrieve information from the internet with the Google search engine.



You: 07:28 PM

Open with a general self-introduction prompt, then move into follow-up questions based on my answer.

CareerForge 07:28 PM

Welcome to your CareerForge interview preparation session! To kick things off, let's start with a brief self-introduction. Please tell me about yourself, focusing on your professional background, current role, and career aspirations.

Once you've shared, I'll tailor some interview questions and preparation strategies based on your profile. I'll cover both technical and soft-skill-based questions relevant to your specific role and industry.

Remember, I'm here to help you prepare effectively. So, go ahead and give me a quick overview of your professional journey.

► How did I get this answer?



Type something...




# RESULTS

## Deployed AI Agent

**CareerForge** ✔ Deployed Online

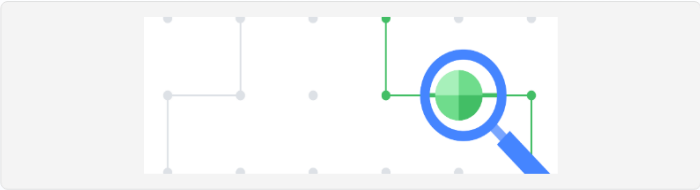
[API reference](#) [Test](#) [Preview](#)

New chat +

 CareerForge 07:19 PM

Welcome to CareerForge

CareerForge is an AI-powered Interview Trainer Agent that helps users prepare for job.



Quick start samples

Let's do a mock behavioral round using STAR format. Ask me a question first and then provide feedback on my answer. →

I want to focus on communication and teamwork skills today. Provide 3 behavioral questions and ideal responses in STAR format. →

Ask me multiple questions one at a time, evaluate each response, then explain what I did well and what to improve. →

Open with a general self-introduction prompt, then move into follow-up questions based on my answer. →

Type something... ▶

# RESULTS

## Deployed AI Agent

**CareerForge** Deployed Online

API reference   Test   **Preview**

New chat +

K

You 07:17 PM

I want to focus on communication and teamwork skills today. Provide 3 behavioral questions and ideal responses in STAR format.

CF

CareerForge 07:17 PM

I'm glad to hear you're focusing on communication and teamwork skills. Here are three behavioral interview questions along with ideal responses in the STAR format (Situation, Task, Action, Result):

1. **Question:** Can you describe a time when you had to communicate a complex idea to a team member who was not technically proficient?

**STAR Response:**

- Situation:** "In my previous role as a Project Manager, I was responsible for coordinating with team members from diverse technical backgrounds."
- Task:** "I needed to explain a complex software integration process to a team member with limited technical knowledge to ensure everyone was on the same page."
- Action:** "I started by breaking down the process into simpler steps, using visual aids and analogies to help illustrate the concept. I also encouraged questions and made sure to clarify any doubts my team member had."
- Result:** "As a result, my team member gained a solid understanding of the integration process, which improved collaboration and reduced miscommunication. This approach also boosted my communication skills and helped me become more adaptable in conveying information to team members with varying levels of expertise."

2. **Question:** Tell me about a time when you had to work with a difficult team member. How did you handle it?

**STAR Response:**

- Situation:** "During a cross-functional project as a Marketing Specialist, I encountered a challenging situation while collaborating with a team member from the Sales department."
- Task:** "We had differing opinions on the target audience for our upcoming campaign, which led to disagreements and inefficiencies in our workflow."

Type something... >

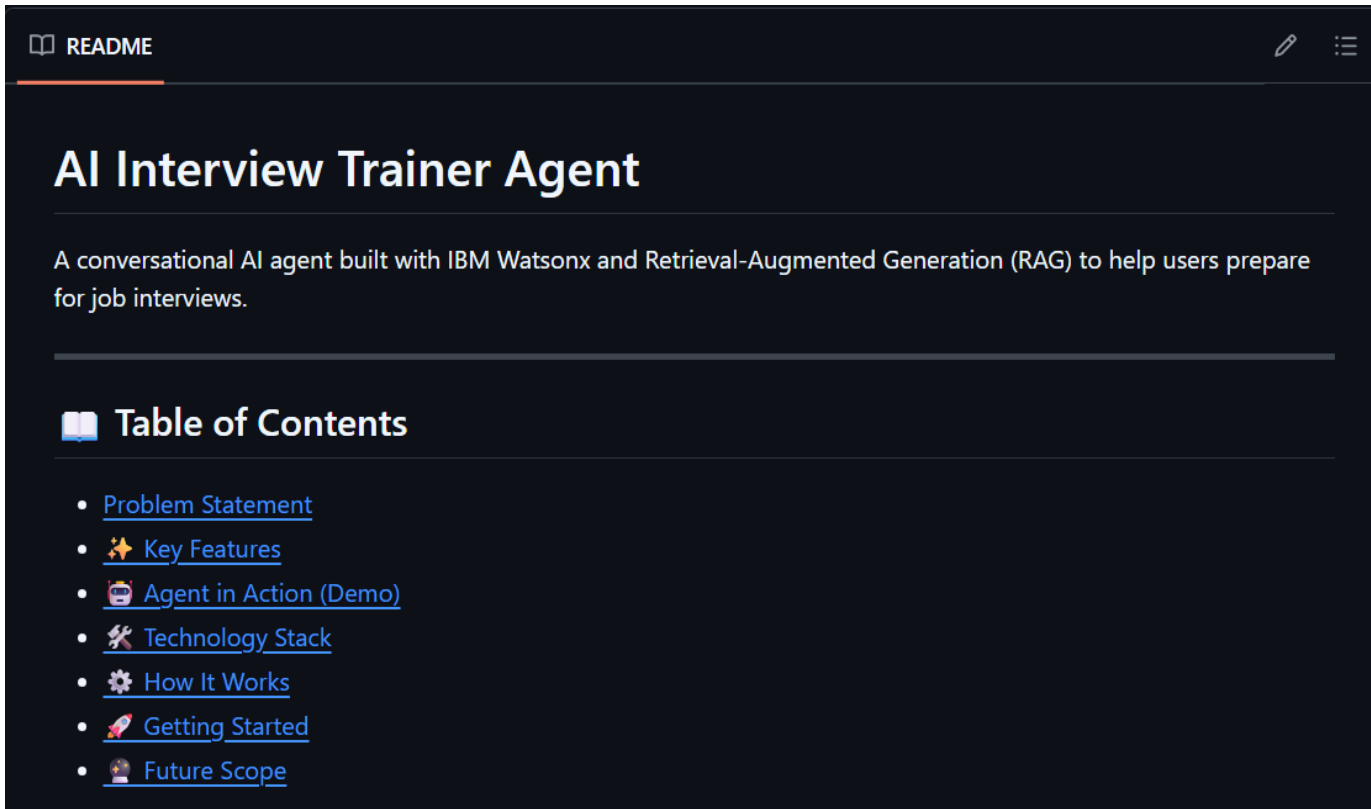
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## CONCLUSION

- The Interview Trainer Agent effectively prepares users for competitive job interviews by providing personalized and relevant content.
- It boosts user confidence and sharpens responses by leveraging AI to simulate real interview scenarios.
- By automating the retrieval of role-specific questions and preparation strategies, it saves users valuable time and effort.
- This agent enhances the quality and efficiency of interview preparation, leading to higher success rates for job seekers in any industry.

# GITHUB LINK

- <https://github.com/Kunsh1/CareerForge.git>



The screenshot shows a GitHub repository page for 'AI Interview Trainer Agent'. The page has a dark theme. At the top, there's a 'README' tab. Below it, the title 'AI Interview Trainer Agent' is displayed in a large, bold font. A description follows: 'A conversational AI agent built with IBM Watsonx and Retrieval-Augmented Generation (RAG) to help users prepare for job interviews.' Below this, there's a 'Table of Contents' section with a list of links: 'Problem Statement', 'Key Features', 'Agent in Action (Demo)', 'Technology Stack', 'How It Works', 'Getting Started', and 'Future Scope'. Each link is preceded by a small icon.

README

## AI Interview Trainer Agent

A conversational AI agent built with IBM Watsonx and Retrieval-Augmented Generation (RAG) to help users prepare for job interviews.

### Table of Contents

- [Problem Statement](#)
- [Key Features](#)
- [Agent in Action \(Demo\)](#)
- [Technology Stack](#)
- [How It Works](#)
- [Getting Started](#)
- [Future Scope](#)

# FUTURE SCOPE

- **Voice-Activated Mock Interviews:** A feature for users to practice their verbal responses and receive feedback on tone and pacing.
- **Real-Time Collaboration Features:** Allowing career coaches or mentors to join a practice session and provide live feedback.
- **Resume Analysis and Feedback:** AI-driven suggestions to improve a user's resume based on the target job description.
- **Company-Specific Insights:** Deeper integration with databases that provide insights into the specific interview processes and culture of individual companies.
- **Integration with Job Platforms:** A browser extension that automatically provides preparation tips when a user is viewing a job posting on platforms like LinkedIn or Indeed.

# IBM CERTIFICATIONS



# IBM CERTIFICATIONS





# IBM CERTIFICATIONS

**IBM SkillsBuild**

Completion Certificate



This certificate is presented to

Kunsh Mittal

for the completion of

**Lab: Retrieval Augmented Generation with  
LangChain**

(ALM-COURSE\_3824998)

According to the Adobe Learning Manager system of record

**Completion date:** 25 Jul 2025 (GMT)

**Learning hours:** 20 mins



**THANK YOU**