

IBM HACKATHON PROJECT

INTERVIEW TRAINER AGENT

Presented By:

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OUTLINE

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

PROBLEM STATEMENT

Job seekers often face challenges in preparing effectively for interviews, especially when it comes to identifying role-specific questions, understanding industry expectations, and improving both technical and soft skills.

Manual preparation using generic content from the internet does not offer personalized or structured interview training. This leads to **lack of confidence**, **inadequate answers**, and **missed opportunities** in competitive hiring processes.

PROPOSED SOLUTION:

An **AI-powered Interview Trainer Agent**, built using **Retrieval-Augmented Generation (RAG)** and **IBM Cloud technologies**, that provides customized interview preparation by analyzing the user's **resume**, **experience level**, and **target job role**. It retrieves and generates:

- Tailored technical & HR questions
- Behavioral scenario responses
- Role-based preparation tips
- Improvement suggestions
- Model answers & soft skill feedback
- This intelligent assistant enhances user readiness and boosts success rates in interviews.

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

- **Tailored Interview Preparation**

Automatically generates interview questions and answers based on the user's **job role, experience level**.

- **Role-Specific Intelligence**

Retrieves real interview data from job portals and company databases to give **realistic and current** questions.

- **Soft Skill & HR Simulation**

Supports not just technical questions but also **HR scenarios and behavioral questions**, mimicking real-life interview rounds.

WOW FACTORS

- **Instant Feedback System**
Provides **model answers**, **performance tips**, and **areas for improvement**—boosting user confidence and clarity.
- **Multi-Source Retrieval (RAG)**
Uses **Retrieval-Augmented Generation** to combine knowledge from various sources, making the training content highly **accurate and contextual**.
- **Future-Ready AI Model (IBM Granite)**
Uses IBM's **state-of-the-art foundation model** for natural and human-like responses.
- **User-Friendly Interface**
Clean, interactive design that even non-technical users can operate easily.

END USERS

- Fresh Graduates
- Job Seekers
- Career Switchers
- Training & Placement Cells
- Interview Coaching Centers
- HR Departments
- EdTech Platforms

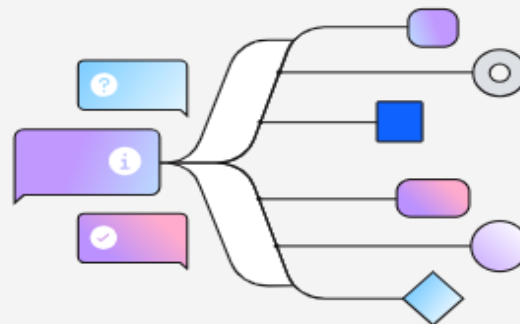
RESULTS



Interview Trainer Agent 08:56 PM

Welcome to Interview Trainer Agent

I'm here to help you for your interview preparation



Sample questions

Generate technical question



Give me a behavioral interview questions



Generate questions to ask the interviewer



list the top skills needed, challenges, and role evolution

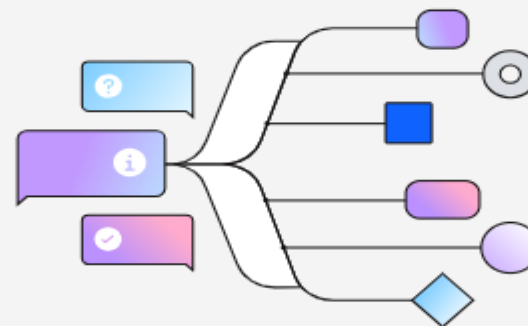


Type something...



RESULTS

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Sample questions

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list the top skills needed, challenges, and role evolution



job role: data scientist
give the interview questions as per the job role



RESULTS



You: 08:57 PM

job role: data scientist give the interview questions as per the job role



Interview Trainer Agent 08:57 PM

Here are some interview questions for the job role of data scientist:

1. What are the assumptions required for a Linear Regression?
2. How do you handle a dataset missing several values?
3. What is the difference between correlation and causation?
4. What is the role of statistics in data science?
5. How do you handle missing data?
6. What is Marginal Probability?
7. What are the Probability Axioms?
8. What is the difference between supervised and unsupervised learning?
9. How is logistic regression used in data science?
10. Have you ever had to explain the technical details of a project to a nontechnical person? How did you do it?


These questions cover a range of topics from general data science concepts to specific techniques and methodologies. They are designed to assess your understanding of the field and your ability to apply that knowledge in practical scenarios. Good luck with your interview preparation!

► How did I get this answer?

RESULTS

JC You: 08:58 PM

provide answers also

 Interview Trainer Agent 08:58 PM

Sure! Here are some answers to the interview questions for the job role of data scientist:

1. What are the assumptions required for a Linear Regression?

- Linearity: The relationship between the independent variables and the dependent variable is linear.
- Independence: The observations are independent of each other.
- Homoscedasticity: The residuals have constant variance at every level of the independent variables.
- Normality: The residuals of the model are normally distributed.

2. How do you handle a dataset missing several values?

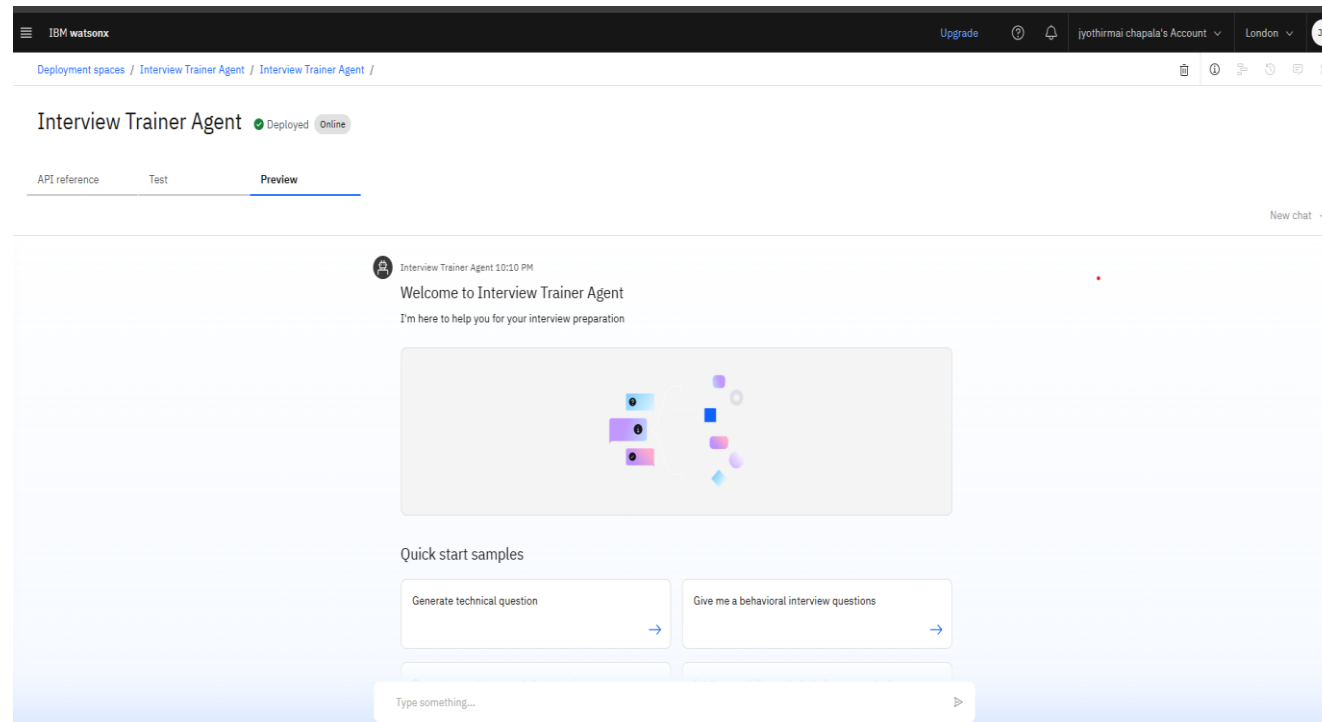
- Imputation: Fill in missing values with mean, median, or mode.
- Deletion: Remove rows or columns with missing values.
- Prediction: Use algorithms to predict missing values based on other data.

3. What is the difference between correlation and causation?

- Correlation: A statistical measure that expresses the extent to which two variables are linearly related.

RESULTS

Deployed AI Agent



CONCLUSION

- The Interview Trainer Agent provides **personalized** and **comprehensive** interview preparation.
- Enhances user **confidence**, **clarity**, and **performance** through AI-driven training.
- Covers both **technical** and **soft skills** using real-time data and role-based customization.

CONCLUSION

- Saves time, increases success rates, and improves readiness for competitive hiring.
- Demonstrates the power of **RAG + IBM Granite** in solving real-world problems effectively.

GITHUB LINK

- [Github](#)

(or)

- https://github.com/jyothirmmai-chapala/Interview_Agent/blob/main/screenshot%281%29.png

FUTURE SCOPE

- Voice-Based Interview Simulation
- Multilingual Support
- Integration with Job Portals
- Resume Analysis Enhancements
- Video Feedback System
- Gamified Interview Challenges

IBM CERTIFICATIONS

In recognition of the commitment to achieve
professional excellence



jyothirmai chapala

Has successfully satisfied the requirements for:

Getting Started with Artificial Intelligence



Issued on: Jul 16, 2025

Issued by: IBM SkillsBuild

Verify: <https://www.credly.com/badges/c111a31c-7257-4400-bf5e-7c2dc7000755>



IBM CERTIFICATIONS

IBM **SkillsBuild**

Completion Certificate



This certificate is presented to
jyothirmai chapala

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



THANK YOU