
CAPSTONE PROJECT

PREPPAL

Presented By:

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OUTLINE

- Problem Statement
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PROBLEM STATEMENT

In today's hyper-competitive job market, candidates often struggle to prepare effectively for interviews due to the overwhelming amount of scattered resources and lack of personalized guidance. Traditional prep tools lack role-specific insights and adaptive feedback mechanisms, resulting in poor performance and lowered confidence during actual interviews.

Proposed Solution:

PrepPal is an intelligent AI agent designed to offer personalized, role-specific interview preparation. It uses Natural Language Processing (NLP), Retrieval-Augmented Generation (RAG) to access curated datasets and generate tailored questions, model answers, and improvement tips based on a user's resume, job role, and experience level.

TECHNOLOGY USED

1. IBM Cloud Lite Services

Used for hosting, deployment, and service orchestration within watsonx and IBM Cloud Object Storage.

2. Natural Language Processing (NLP)

Drives understanding of user inputs and generation of context-aware, human-like responses.

3. Retrieval-Augmented Generation (RAG)

Enables hybrid reasoning by retrieving relevant info from uploaded datasets and combining it with generative AI.

4. IBM Granite Foundation Model

Powerful large language model from IBM, fine-tuned for enterprise-grade accuracy and task-specific fluency.

IBM CLOUD SERVICES USED

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

WOW FACTORS

PrepPal is an AI Agent that empowers job seekers by offering personalized, role-specific interview preparation. It reduces time spent on scattered research, boosts confidence through realistic mock interviews, and ensures users are aligned with current industry expectations. Designed to be focused, intelligent, and reliable, PrepPal transforms the way candidates prepare for interviews.

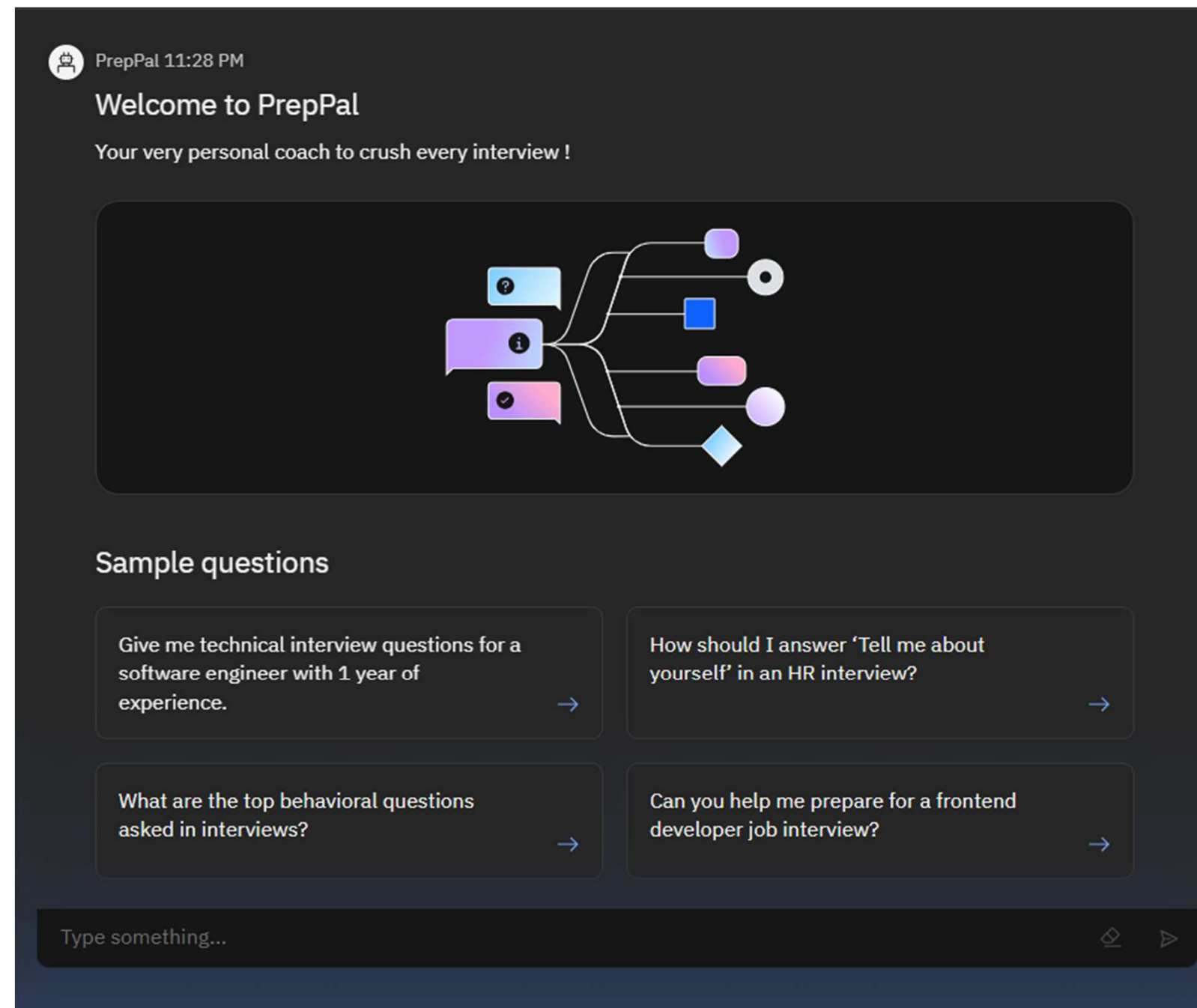
- ◆ Unique Features:

- Role-specific technical and behavioral interview questions
- Resume-based personalization for tailored preparation
- Real-time feedback and improvement tips
- HR guidelines and behavioral scenario simulation
- Retrieval-Augmented Generation (RAG) over curated datasets
- Model answers aligned with industry expectations
- Domain-restricted focus on interview and career preparation
- Built entirely on IBM Cloud with watsonx and Granite LLM

END USERS

- Final-year students and fresh graduates
- Early-career professionals (1–3 years experience)
- Domain-specific job seekers (e.g., tech, HR, design)
- Career switchers exploring new industries
- Placement cells, EdTechs, and training platforms

RESULTS



RESULTS

LU You: 11:20 PM

Can you help me prepare for a frontend developer job interview?

 PrepPal 11:20 PM

Heyy... Your Favorite training partner PrepPal is here !! . I can help you prepare for your interviews with customized questions, answers, and tips. What specific aspects of frontend development are you focusing on? Are there any particular technologies or frameworks you're using or planning to use in your role?

► How did I get this answer?

LU You: 11:20 PM

I'm focusing more on react

 PrepPal 11:20 PM

Great! As a React frontend developer, you'll likely be asked about your experience with this library, as well as related technologies. Here are 5 technical questions you might encounter, along with sample answers:

1. Question: Can you explain the concept of components and props in React?

- **Sample Answer:** In React, components are independent and reusable pieces of code that return a React element to be rendered to the DOM. Props (short for properties) are attributes passed to components, allowing for dynamic content and configuration. They are read-only and should not be modified by the component.

2. Question: How does the virtual DOM work in React, and why is it beneficial?

• **Sample Answer:** React maintains a lightweight in-memory representation of the DOM, known as the

2. Question: How does the virtual DOM work in React, and why is it beneficial?

- **Sample Answer:** React maintains a lightweight in-memory representation of the DOM, known as the virtual DOM. When state or props change, React first updates the virtual DOM, then efficiently compares it with the previous virtual DOM to determine the minimum set of changes needed. It applies these changes to the real DOM, minimizing direct manipulations and improving performance.

3. Question: What are React hooks, and how have they impacted your development process?

- **Sample Answer:** React Hooks, introduced in React 16.8, are functions that let you use state and other React features without writing a class. Hooks like `useState` and `useEffect` have simplified component logic, made code more reusable, and helped break down components into smaller, more manageable functions.

4. Question: Explain the difference between state and props in React components.

- **Sample Answer:** Props are a way of passing data from parent components to child components. They are read-only, and child components cannot modify props. State, on the other hand, is similar to props but is private and can be modified by the component itself. Changes in state trigger re-renders in a component and its children.

5. Question: How do you handle side effects in a React component?

- **Sample Answer:** Side effects, such as data fetching or directly manipulating the DOM, should be handled in React components using the `useEffect` hook. This hook allows you to perform side effects after a component has rendered and lets you manage asynchronous operations, subscriptions, or one-time effects efficiently.

Type something...



Type something...



RESULTS

LU

You: 11:18 PM

How should I answer 'Tell me about yourself' in an HR interview?

PrepPalllll 11:18 PM

Heyy... Your Favorite training partner PrepPal is here !! . I can help you prepare for your interviews with customized questions, answers, and tips. What role are you applying for?

For the question "Tell me about yourself," it's crucial to keep your answer concise, relevant, and positive. Tailor your response to the job you're applying for. Here's a general structure:

- 1. Start with a brief introduction:** Mention your current role or recent achievement that's relevant to the position you're applying for.
- 2. Highlight your relevant skills and experiences:** Discuss 2-3 skills or experiences that make you a good fit for the role. Quantify these points if possible.
- 3. Express your career goals:** Show that you're ambitious and that your goals align with the company's objectives.
- 4. End with a call to action:** Indicate your enthusiasm for the opportunity to contribute to the company.

Sample Answer for a Software Engineer Role:

"I am currently working as a Software Engineer at XYZ Corporation, where I've been instrumental in developing and maintaining several key applications. My expertise lies in Java and Python, and I have a strong background in data structures and algorithms. In my previous role, I led a team that improved our application's performance by 30% through code optimization. I am passionate about building scalable and efficient software solutions, and I'm excited about the opportunity to bring my technical skills and problem-solving expertise to your team at ABC Company to help innovate and grow your product offerings."

Remember, this is just a template. Adapt it according to your own background and the specific requirements of the job you're interviewing for. Practice your answer until you can deliver it smoothly and confidently. Good luck!

► How did I get this answer?

Type something...

RESULTS

Deployed AI Agent

The screenshot displays the IBM watsonx dashboard. At the top, the navigation bar includes the IBM watsonx logo, an 'Upgrade' button, a help icon, a notification bell, and a user profile dropdown for 'Laasya Uppara Gummala's ...' with a location selector set to 'Dallas'. Below the navigation bar, the breadcrumb trail reads 'Deployment spaces / Paypal_Agent_Deployment / PrepPal /'. The main content area features the 'PrepPal' agent name with a green checkmark indicating it is 'Deployed' and 'Online'. Three tabs are visible: 'API reference', 'Test', and 'Preview', with the 'Preview' tab currently selected. On the right side of the preview area, there is a 'New chat +' button. The chat history shows a user query at 11:22 PM: 'What are the top behavioral questions asked in interviews?'. The PrepPal agent responds at the same time, providing an introduction and a list of three common behavioral interview questions with suggested approaches for answering them. The questions are: 1. A challenge at work, 2. Handling feedback or criticism, and 3. Working as part of a team. Each question is followed by a detailed 'Answer' template. At the bottom, there is a text input field with the placeholder 'Type something...' and a send button.

IBM watsonx Upgrade ? Laasya Uppara Gummala's ... Dallas LU

Deployment spaces / Paypal_Agent_Deployment / PrepPal /

PrepPal ✓ Deployed Online

API reference Test **Preview**

New chat +

You 11:22 PM
What are the top behavioral questions asked in interviews?

PrepPal 11:22 PM
As an interview preparation assistant, I can certainly guide you on common behavioral interview questions. Here are five frequently asked ones with suggested approaches for answering:

- 1. Question:** Can you describe a time when you faced a significant challenge at work and how you handled it? **Answer:** Begin by setting the scene, briefly describing the situation. Then, explain the actions you took to address the challenge, emphasizing your problem-solving skills and resilience. Conclude by sharing the outcome or what you learned from the experience.
- 2. Question:** How do you handle feedback or criticism? **Answer:** Highlight your openness to feedback and how you view it as a growth opportunity. Provide an example where constructive criticism led to a positive change or improvement in your work.
- 3. Question:** Tell me about a time when you had to work as part of a team to achieve a common goal. **Answer:** Discuss your role within the team, your contributions, and how you collaborated with others. Emphasize your interpersonal and communication skills, and the successful outcome of the project or task.

Type something...

CONCLUSION

- PrepPal redefines interview preparation by combining the power of AI with personalized, role-specific guidance.
- By leveraging IBM's cloud-native technologies, Retrieval-Augmented Generation, and the Granite foundation model, PrepPal delivers an intelligent, reliable, and focused interview training experience.
- It empowers users to prepare smarter, gain confidence, and face interviews with clarity and precision.
- As the demand for tailored, tech-driven learning solutions grows, PrepPal stands at the forefront — offering a scalable, impactful solution for modern job seekers.

FUTURE SCOPE

- Voice-based Mock Interviews
- Adaptive Learning Pathways
- Integration with Live Job Portals
- Collaboration Mode
- AI-Powered Resume Reviewer
- Multi-language Support
- Analytics Dashboard

IBM CERTIFICATIONS

GETTING STARTED WITH AI

In recognition of the commitment to achieve
professional excellence



Laasya U G

Has successfully satisfied the requirements for:

Getting Started with Artificial Intelligence



Issued on: Jul 17, 2025

Issued by: IBM SkillsBuild

Verify: <https://www.credly.com/badges/a219de7d-cad9-4f2a-b063-b38ec21d8a71>



RAG LAB

IBM **SkillsBuild**

Completion Certificate



This certificate is presented to
Laasya Uppara Gummala

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



Github link : <https://github.com/Laasya-2279/PrepPal>

GITHUB LINK

- <https://github.com/Laasya-2279/PrepPal>



THANK YOU