

CAPSTONE PROJECT

CARYOAI

An AI-Powered Personalized Career Counseling Agent

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OUTLINE

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PROBLEM STATEMENT

Students and career switchers often face confusion in choosing the right career path due to lack of personalized mentorship. Traditional counseling is generic, time-bound, and lacks flexibility. There's a need for an intelligent, 24/7 career advisor that understands individual goals and provides actionable guidance.

Proposed Solution:

CaryoAI is an AI-powered career counseling agent built using **IBM Watsonx's Agentic AI**. It interacts with users to understand their career interest, skill level, learning time, and target goals — then generates customized roadmaps. It explains career paths, answers questions, and guides users across multiple domains like Web Development, AI/ML, Cybersecurity, etc.

TECHNOLOGY USED

IBM cloud lite services

IBM Watsonx AI Studio

Agentic AI Lab

IBM Granite model

IBM CLOUD SERVICES USED

- IBM Cloud Watsonx AI Studio
- IBM Watsonx Assistant (Agentic AI)
- IBM Cloud Agent Lab
- IBM Granite foundation model

WOW FACTORS

CaryoAI transforms traditional career counseling with an interactive, AI-driven approach. It adapts to each user's needs and guides them step-by-step with smart suggestions, making career planning more accessible and practical.

Unique features:

Personalized guidance based on user's interest, skill level, and available time

Explains career fields with future scope and benefits

Generates tailored learning roadmaps using trusted free & paid resources

Recommends relevant projects, internships, and certifications

Recommends relevant projects, internships, and certifications

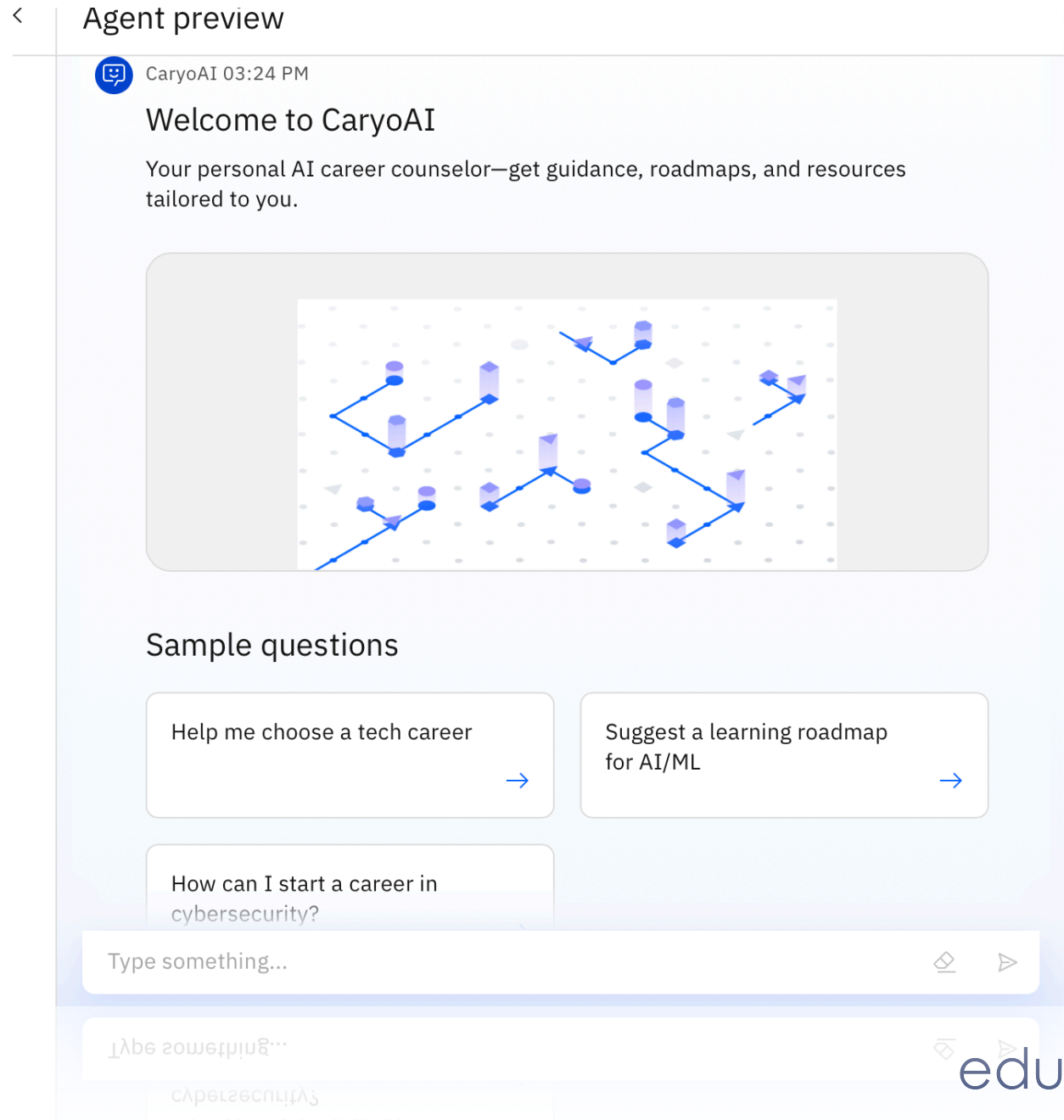
Friendly user experience with dynamic conversation flow

END USERS

- Students (School/College/Graduates)
- Career Changers
- Freshers preparing for the job market
- Academic Counselors and Institutes

RESULTS

- Clean and intuitive user interface with a friendly welcome message
- Sample questions make it easy to start meaningful career conversations
- Dynamic AI response based on real-time user inputs
- Personalized guidance on tech careers with smart suggestions



RESULTS

- CaryoAI engages in a natural conversation based on user's interest
- Clearly explains what is Cyber Security in simple terms
- Highlights *career benefits* and industry demand
- Ensures clarity before diving deeper into roadmaps
- Mimics real counseling sessions with AI-driven relevance

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Agent preview



You: 03:33 PM

Help me choose a tech career



CaryoAI 03:33 PM

Hi there! I'm CaryoAI, your personal AI career mentor. What career path or area would you like guidance on today?

• How did I get this answer?



You: 03:34 PM

in cyber security



CaryoAI 03:34 PM

Sure! Here's what I can tell you about cyber security:

What is cyber security?

Cyber security refers to the practices, technologies, and processes designed to protect digital information, networks, and systems from unauthorized access, use, disclosure, disruption, modification, or destruction.

Why pursue cyber security?

- High demand for skilled professionals due to increasing cyber threats
- Opportunity to work in various industries, including government, finance, and healthcare

Type something...



RESULTS

- CaryoAI customizes learning plans based on user's:
 - Skill level (Beginner)
 - Daily availability (2 hours)
 - Learning timeline (3 months)
- Provides clear key points, daily study split, and study resources
- Suggests realistic milestones with a structured monthly roadmap
- Helps users stay focused and avoid overwhelming topics too early

< Agent preview

RJ You: 03:39 PM
I'm a beginner and i can give 2 hours per day and I want to learn in 3 months

CaryoAI 03:39 PM
You're a beginner aiming to master cyber security in 3 months with 2 hours daily.

Based on your current level (beginner), daily time (2 hours), and goal (3 months), here are some key points:

- ✓ Start with the basics of networking, operating systems, and security fundamentals ⌚ Divide your 2 hours into 1 hour of theory and 1 hour of practical exercises or labs 🔧 Focus on using online platforms like Udemy, Coursera, and Cybrary for courses and tutorials 🧠 Avoid diving into advanced topics like penetration testing or security research for now 🎯 By the end of 3 months, you should be able to understand basic security concepts, identify common threats, and know how to protect networks and systems



Here's a suggested 3-month roadmap:

Month 1: Networking and OS fundamentals

- Week 1-2: Learn networking basics (TCP/IP, DNS, DHCP)
- Week 3-4: Understand operating system security (Windows, Linux)

Month 2: Security fundamentals and threats

Week 5: Cyber security fundamentals (OS hardening, malware analysis)

Type something...  

RESULTS

Deployed AI Agent

The screenshot displays the IBM watsonx user interface. At the top, a dark navigation bar includes the 'IBM watsonx' logo, an 'Upgrade' button, a help icon, a notification bell, and user account information for 'rayansh Jhs's Account' in 'Dallas'. Below this, a breadcrumb trail shows 'Deployment spaces / IBM_Project / CaryoAI'. The main content area features the 'CaryoAI' agent name with a green 'Deployed' status and an 'Online' indicator. Three tabs are visible: 'API reference', 'Test', and 'Preview', with the 'Preview' tab currently selected. A 'New chat +' button is located in the top right corner of the chat area. The chat history shows three messages: an initial greeting from CaryoAI, a user query about 'Cyber Security', and a detailed response from CaryoAI explaining what cyber security is and why it's important.

IBM watsonx Upgrade ? rayansh Jhs's Account Dallas RJ

Deployment spaces / IBM_Project / CaryoAI /

CaryoAI ✓ Deployed Online

API reference Test **Preview**

New chat +

CaryoAI 03:48 PM
Hi there! I'm CaryoAI, your personal AI career mentor. What career path or area would you like guidance on today?

You 03:48 PM
In Cyber Security

CaryoAI 03:48 PM
Sure! Here's what I can tell you about Cyber Security:

What is Cyber Security?
Cyber Security refers to the practice of protecting digital information, networks, and systems from unauthorized access, use, disclosure, disruption, modification, or destruction.

Why pursue Cyber Security?

- High demand for skilled professionals

CONCLUSION

- **CaryoAI successfully demonstrates the power of AI in personalized career counseling**, offering tailored learning paths based on user preferences, goals, and skill levels.
- **Built using IBM Watsonx and Agentic AI architecture**, the agent ensures dynamic, contextual conversations and practical recommendations.
- **The agent simplifies career decisions** by providing clear roadmaps, study resources, and motivation tailored to individual needs.

CONCLUSION

- **Scalable for diverse domains**, including tech, medical, design, and government career paths — making it suitable for students, job seekers, and professionals.
- **Future scope includes** adding real-time job/internship integration, resume building support, and multilingual guidance.
- **With minimal user input**, CaryoAI delivers a highly guided and structured output — improving clarity, direction, and decision-making in career planning.

FUTURE SCOPE

- **Multi-domain Expansion:** Extend support to non-tech fields like law, medicine, arts, and competitive exam preparation (UPSC, NEET, etc.).
- **Multilingual Capability:** Integrate regional language support to make career guidance accessible to users from diverse linguistic backgrounds.
- **Voice Interaction:** Add voice-based input/output for more natural and inclusive user experience.
- **Real-time Opportunities:** Integration with job/internship portals (like LinkedIn, Internshala, etc.) for live career opportunity suggestions.

FUTURE SCOPE

- **Resume and Portfolio Builder:** Help users build ATS-friendly resumes and portfolios tailored to their chosen career paths.
- **Learning Tracker and Reminders:** Notify users of progress, set daily study goals, and suggest revision strategies.
- **Analytics Dashboard:** For institutions to track user interests, popular domains, and outcomes for better career planning initiatives.

IBM CERTIFICATIONS

- Screenshot/ credly certificate(getting started with AI)



RAG LAB certificate



GITHUB LINK

- Git hub lik : [CaryoAI-Career-Counseling-Agent](#)



THANK YOU