

IBM EDUNET PROJECT

RoadMap Agent

Presented By:

Student name :Pavan Kumar Reddy Chinthapanti

College Name & Department : SJCE & CSE

OUTLINE

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

PROBLEM STATEMENT

Many students feel lost when trying to figure out which learning path to follow. With so many online courses out there, it's easy to get overwhelmed or pick something that doesn't truly match their interests or long-term goals. What's missing is a way to get smart, personalized guidance — like having a mentor who understands where they are and where they want to go.

Proposed Solution:

RoadMap Agent aims to solve this by acting like a smart learning coach powered by Agentic AI. It chats with students to understand what they're passionate about — and figures out their current skill level. Based on this, it builds a tailored course roadmap just for them. As the student progresses, the roadmap evolves too — adapting to their pace, interests, and goals, just like a real mentor would.

TECHNOLOGY USED

IBM cloud lite services

IBM Granite model

Natural Language Processing (NLP)

Retrieval Augmented Generation (RAG)

IBM CLOUD SERVICES USED

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

WOW FACTORS

RoadMap Agent is more than just a chatbot — it acts like a real AI mentor, adapting to each student's learning style and goals. It dynamically builds and adjusts personalized course roadmaps using agentic AI, based on real-time progress and interests. With smart integration and evolving feedback loops, it offers a truly interactive and scalable learning experience.

Unique features:

- True Personalization with Agentic AI
- skill-Level Assessment via Conversation
- Dynamic Roadmap Adjustment
- Modular and Scalable Framework
- Integration with Real Platforms
- Feedback Loop for Continuous Improvement

END USERS

- Students and Learners
- Educational Institutions
- Mentors and Career Coaches
- Educators

RESULTS


[Upgrade](#) [?](#) [🔔](#) Pavan Kumar

idMap_AI_Agent [Share feedback](#) [β](#) [🟢](#) Autosave on [📁](#) [v](#) [New](#)

ew

Welcome to RoadMap_AI_Agent

Agentic AI coach that adapts learning paths to student skills, interests, and progress



Sample questions

Help me choose a learning path based on my interests →


Assess my current skills in a topic →

Build a personalized roadmap for me to reach my goal →

Update my learning plan based on my recent progress →

Type something... [🗨](#)

RESULTS


 You: 12:56 AM

Hi

 RoadMap_AI_Agent 12:56 AM

Hi, I am your AI learning coach. Tell me your interests, and I'll build your personalized roadmap.

► **How did I get this answer?**

 You: 12:57 AM

Generative AI

 RoadMap_AI_Agent 12:57 AM

Generative AI is a type of artificial intelligence that can create original content, such as text, images, videos based on patterns in data. It uses generative models to produce new and original content, and can be used applications, including text generation, image generation, and video generation. Some examples of generat language models like ChatGPT, image generation models like DALL-E, and video generation models like Ger Adversarial Networks (GANs). Generative AI has the potential to revolutionize many industries, including er education, and healthcare, by providing new and innovative ways to create content.

► **How did I get this answer?**



pe something...

RESULTS

Agent preview

 You: 12:58 AM

I dont know anything about DevOps please suggest roadmap from beginner level to advanced level

 RoadMap_AI_Agent 12:58 AM

Here is a suggested roadmap for learning DevOps from beginner to advanced level:

1. Start with the basics:

- Learn a programming language (e.g., Python, Java, or C++).
- Understand OS concepts (e.g., Linux, Windows, or macOS).
- Familiarize yourself with version control systems (e.g., Git).

2. Learn DevOps fundamentals:

- Study DevOps principles and practices.
- Understand the DevOps lifecycle (planning, development, testing, deployment, monitoring, and feedback).
- Learn about continuous integration and continuous deployment (CI/CD) pipelines.

3. Gain hands-on experience:

- Practice using DevOps tools (e.g., Jenkins, Docker, Kubernetes, or Ansible).
- Work on projects that involve automating deployment, scaling, and monitoring.
- Participate in online communities (e.g., Reddit's r/devops) to learn from others and get feedback on your projects.

Agent preview

3. Gain hands-on experience:

- Practice using DevOps tools (e.g., Jenkins, Docker, Kubernetes, or Ansible).
- Work on projects that involve automating deployment, scaling, and monitoring.
- Participate in online communities (e.g., Reddit's r/devops) to learn from others and get feedback on your projects.

4. Advance your skills:

- Learn about advanced topics (e.g., microservices, service mesh, or serverless computing).
- Study cloud computing platforms (e.g., AWS, Azure, or Google Cloud).
- Explore emerging trends (e.g., artificial intelligence, machine learning, or DevSecOps).

5. Pursue certifications:

- Consider obtaining certifications (e.g., DevOps Foundation Certification or Certified DevOps Engineer) to demonstrate your expertise.
- Stay up-to-date with industry developments and best practices.

Remember, learning DevOps is a continuous process. Stay curious, keep practicing, and always be willing to learn and adapt to new technologies and methodologies.

► How did I get this answer?



RESULTS


Deployed AI Agent

Deployment spaces / RoadmapAI / RoadMap_AI_Agent /

RoadMap_AI_Agent ✓ Deployed Online


API reference Test **Preview**

New chat +

 RoadMap_AI_Agent 12:52 AM

Welcome to RoadMap_AI_Agent

Agentic AI coach that adapts learning paths to student skills, interests, and progress



Quick start samples

Help me choose a learning path based on my interests

Assess my current skills in a topic

Type something...

CONCLUSION

- RoadMap Agent bridges the gap between learners and effective guidance by acting as a smart, adaptive AI mentor
- It personalizes each student's journey based on their interests, skill levels, and goals — evolving with them over time
- By combining agentic AI with dynamic planning and real-world integration, it transforms the way students explore, learn, and grow in their careers

FUTURE SCOPE

- Multi-language & Regional Customization
- Multi-platform Accessibility
- Collaboration with Human Mentors
- AI-Driven Career Matching
- Adaptive Learning Algorithms
- Institutional Deployment

IBM CERTIFICATIONS

In recognition of the commitment to achieve
professional excellence



Pavan Chinthapanti

Has successfully satisfied the requirements for:

Getting Started with Artificial Intelligence



Issued on: Jul 20, 2025
Issued by: IBM SkillsBuild

Verify: <https://www.credly.com/badges/ec2ccb2c-f365-45b8-80c1-e23201886107>



IBM **SkillsBuild**

Completion Certificate



This certificate is presented to

Pavan Kumar Reddy Chinthapanti

for the completion of

Lab: Retrieval Augmented Generation with LangChain

(ALM-COURSE_3824998)

According to the Adobe Learning Manager system of record

Completion date: 26 Jul 2025 (GMT)

Learning hours: 20 mins

GITHUB LINK

GitHub Link: <https://github.com/pavn005/RoadMap-AI-Agent>



THANK YOU