IBM EDUNET PROJECT

RoadMap Agent

Presented By:

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OUTLINE

- Problem Statement
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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 Al

skill-Level Assessment via Conversation

Dynamic Roadmap Adjustment

Modular and Scalable Framework

Integration with Real Platforms

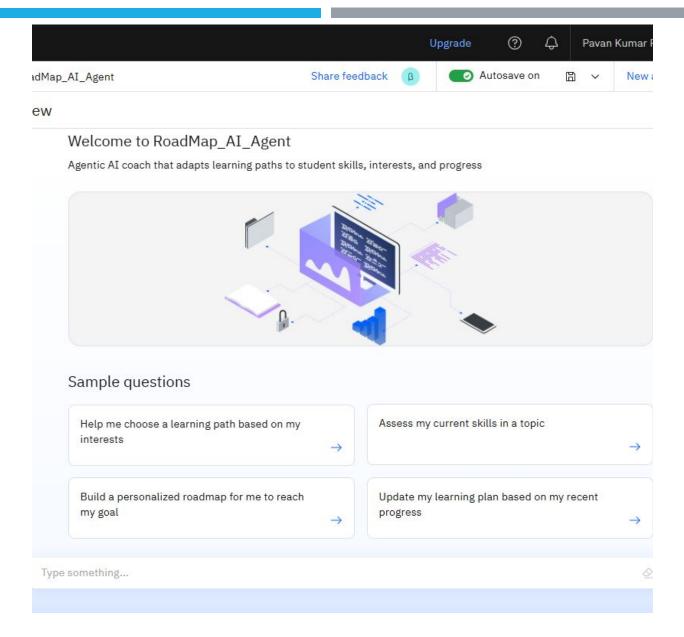
Feedback Loop for Continuous Improvement



END USERS

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







R 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?

R 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?

C

pe something...



Agent preview

PR 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.

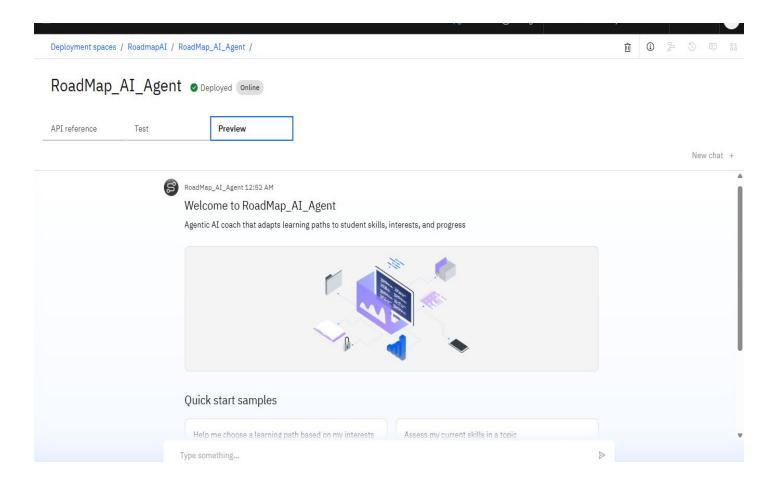
Remember, learning DevOps is a continuous process. Stay curious, keep practicing, and always be willing to learn and adapt to new technologies and methodologies.

▶ How did I get this answer?

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Deployed Al Agent





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
- Al-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

