Agentic AI for Personalized Course Pathways

Presented By :-
Student name : **G S Bhavesh Kumar**
College Name & Department : **National Institute of Technology Puducherry**
Computer Science and Engineering

edunet
foundation

OUTLINE

- **Problem Statement**

- **Technology used**

- **Wow factor**

- **End users**

- **Result**

- **Conclusion**

- **Git-hub Link**

- **Future scope**

- **IBM Certifications**

edunet
foundation

PROBLEM STATEMENT

Many students find it difficult to choose the right learning path due to the flood of online courses and lack of clear direction. They often end up in courses that don't match their interests or long-term goals. The absence of personalized guidance makes the journey confusing and demotivating. This challenge slows down both skill development and career clarity.

PROPOSED SOLUTION

❖ The Agentic AI which I built is called ***LearnMate AI.***
❖ ***LearnMate*** is an intelligent AI coach that chats with students to understand their interests and strengths.
❖ It uses that information to design a personalized, evolving course roadmap tailored to each learner.
❖ The system tracks progress and updates recommendations as students grow.
❖ Built using IBM Cloud Lite and IBM Granite, it ensures powerful AI integration and scalability.
❖ This dynamic guidance helps learners stay focused, motivated, and aligned with their career goals.

TECHNOLOGY USED

IBM cloud lite services

Natural Language Processing (NLP)

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

❖ LearnMate behaves like a real mentor, adapting to each student's progress and goals rather than just recommending random courses.

❖ It starts by understanding a student's interests, then designs a unique, evolving learning path that grows with them.

❖ Using IBM Granite, conversations feel natural and supportive, building trust while delivering intelligent guidance.

❖ Every course recommendation is future-focused, aligned with in-demand tech skills and real career outcomes.

❖ It transforms confusion into clarity—giving each learner a personalized journey from curiosity to career readiness.

END USERS

➢ High School Graduate

➢ College Student

➢ Career Switcher

➢ Job Seeker

➢ Online Learner

RESULTS

RESULTS

Agent preview

GK You: 07:21 PM

List few courses with duration , fee offered by learnmate

watsonx Agent 07:21 PM

Here are few courses offered by LearnMate:

1. **Frontend Web Development**

   - **Duration:** 6 months
   - **Fee:** $300
   - **Aligned Interests:** UI/UX Design, Creative coding
   - **Guidance:** For students who enjoy designing user interfaces and interactive web pages
   - **Key Benefits / Use Cases:** Build responsive websites, use HTML, CSS, JS, React. Great for freelance or frontend roles.

2. **Cybersecurity Fundamentals**

   - **Duration:** 7 months
   - **Fee:** $400
   - **Aligned Interests:** Security, Networking

Type something...

Agent preview

4. **Data Science with Python**

   - **Duration:** 8 months
   - **Fee:** $500
   - **Aligned Interests:** ▲

GK You: 07:23 PM

I am interested in Designing , figma , provide me the desired course details

watsonx Agent 07:23 PM

Here are few courses offered by LearnMate:

1. **Frontend Web Development**

   - **Duration:** 6 months
   - **Fee:** $300
   - **Aligned Interests:** UI/UX Design, Creative coding
   - **Guidance:** For students who enjoy designing user interfaces and interactive web pages
   - **Key Benefits / Use Cases:** Build responsive websites, use HTML, CSS, JS, React. Great for freelance or frontend roles.

Type something...

RESULTS

Agent preview

- **Key Benefits / Use Cases:** Use Figma, Adobe XD, create design systems, conduct usability testing.

4. **Data Science with Python**

- **Duration:** 8 months
- **Fee:** $500
- **Aligned Interests:** Anal ▲

GK You: 07:24 PM

Write a short 7 line point for a person like to interested in cloud computing to develop my career in that field

watsonx Agent 07:24 PM

Sure, here are some steps you can take to develop your career in cloud computing:

1. **Learn the Basics:** Start by understanding the fundamentals of cloud computing, including concepts like IaaS, PaaS, and SaaS.
2. **Choose a Cloud Provider:** Familiarize yourself with one of the major cloud providers like AWS, Azure, or Google Cloud.
3. **Get Certified:** Pursue certifications offered by cloud providers to validate your skills and knowledge.
4. **Hands-On Experience:** Gain practical experience by working on projects or contributing to open-source cloud projects.
5. **Networking:** Connect with professionals in the field through online communities, forums, and networking events.
6. **Stay Updated:** Keep up with the latest trends and technologies in cloud computing by following industry blogs and news.
7. **Specialize:** Consider specializing in a specific area of cloud computing, such as cloud security, DevOps, or cloud architecture.

▶ How did I get this answer?

Type something...

edunet foundation

RESULTS

Deployed AI Agent
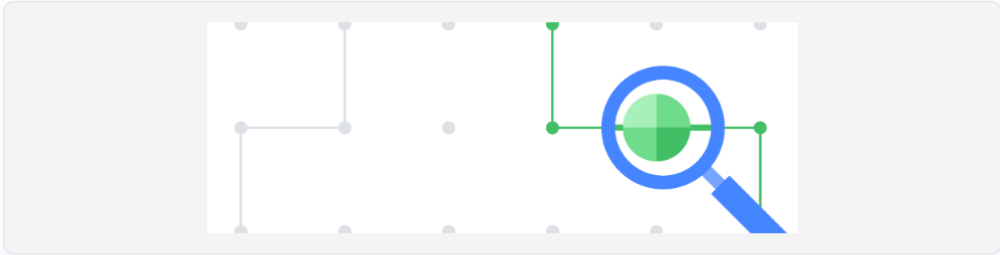
CONCLUSION

❖ LearnMate offers a personalized, AI-driven approach to help learners navigate the overwhelming world of online courses with clarity and confidence.

❖ By adapting to user interests, skill levels, and progress, it creates dynamic learning paths that align with real-world goals.

❖ Powered by IBM Cloud and Granite, LearnMate ensures smart, scalable, and future-ready career guidance for every learner.

FUTURE SCOPE

- ❖ Integration with real-time job market data to suggest industry-relevant skills.
- ❖ Collaboration with universities and edtech platforms for certified course offerings.
- ❖ Gamified learning paths to boost student motivation and retention.
- ❖ Voice-enabled AI mentor for more natural interaction.
- ❖ Multilingual support to reach diverse learners globally.
- ❖ Career mapping tools with internship and job recommendations.

Getting Started with Artificial Intelligence

RAG LAB Certificate

Git hub link : -

https://github.com/GSBK2006/IBM-SkillsBuild-AGENTIC-AI-Project

THANK YOU

edunet
foundation