CAPSTONE PROJECT

LearnMate: 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



OUTLINE

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



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

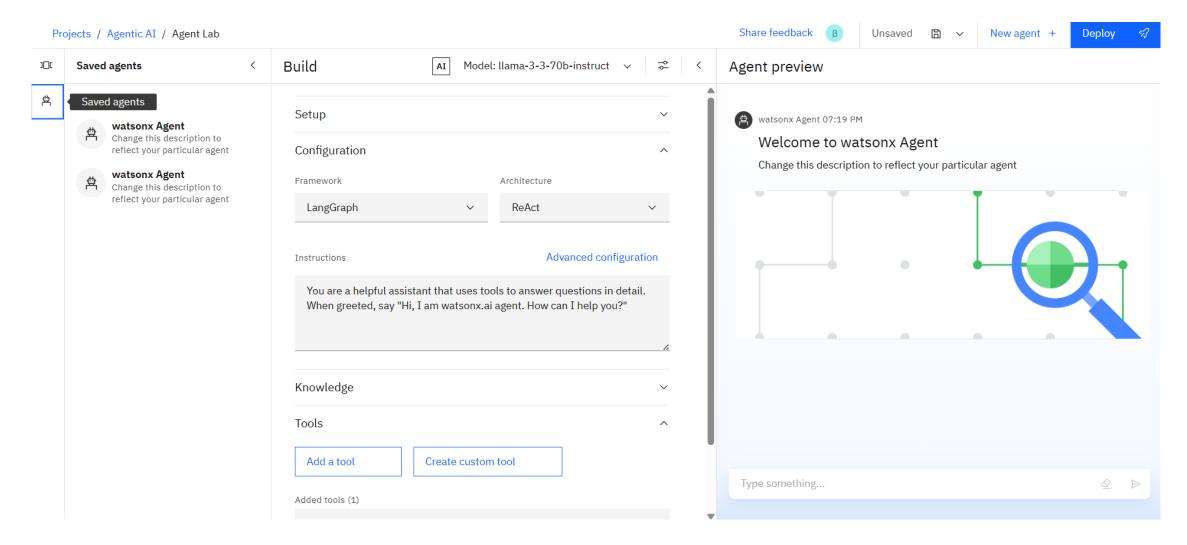
- LearnMate behaves like a real mentor, adapting to each student's progress and goals rather than just recommending random courses.
- It starts by understanding a student's interests, then designs a unique, evolving learning path that grows with them.
- Using IBM Granite, conversations feel natural and 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

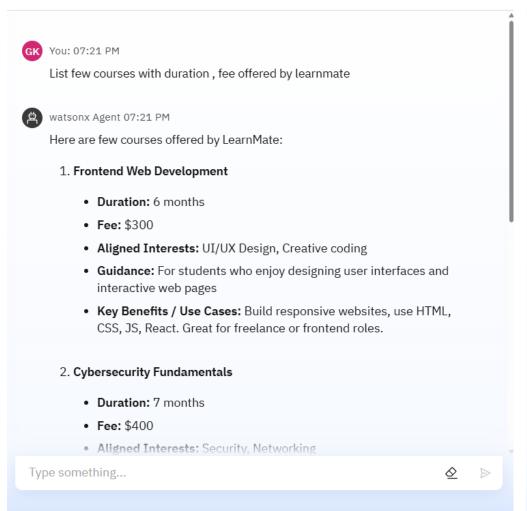
- High School Graduate
- College Student
- Career Switcher
- Job Seeker
- Online Learner



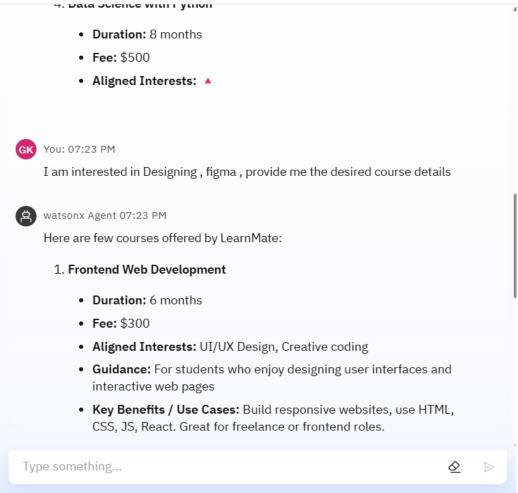




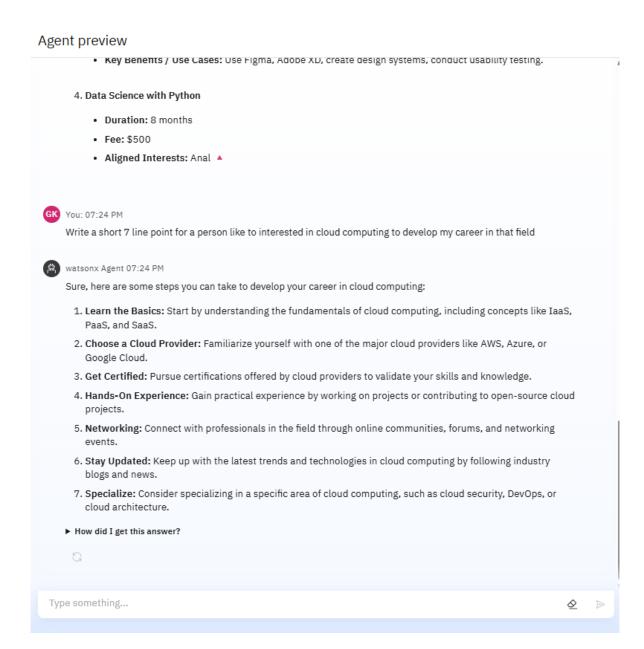
Agent preview



Agent preview

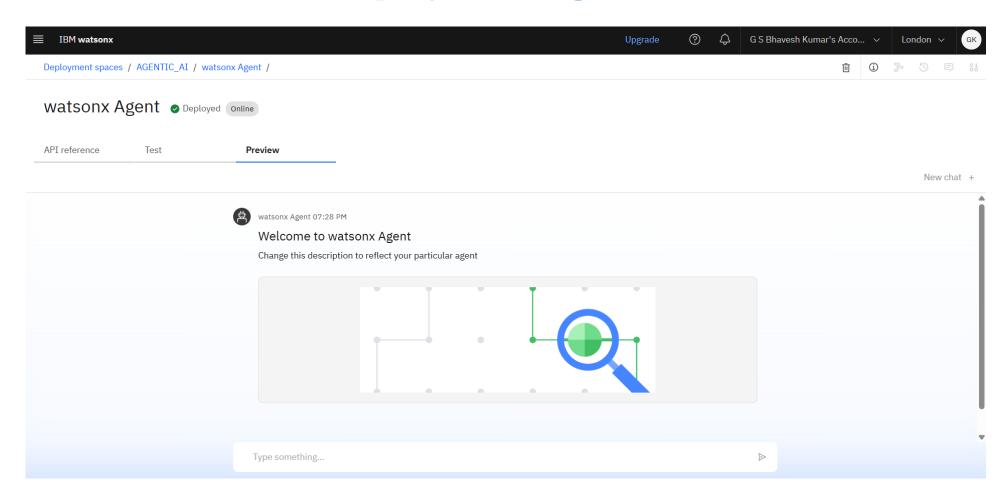








Deployed AI Agent





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.



IBM CERTIFICATIONS

Getting Started with Artificial Intelligence

In recognition of the commitment to achieve professional excellence



G S Bhavesh Kumar

Has successfully satisfied the requirements for:

Getting Started with Artificial Intelligence



Issued on: Jul 15, 2025 Issued by: IBM SkillsBuild

Verify: https://www.credly.com/badges/b47da4f2-4a51-472a-9c7e-46164e0dac62





RAG LAB Certificate

7/24/25, 6:21 PM Completion Certificate | SkillsBuild

IBM SkillsBuild

Completion Certificate



This certificate is presented to

G S Bhavesh Kumar

for the completion of

Lab: Retrieval Augmented Generation with LangChain

(ALM-COURSE_3824998)

According to the Adobe Learning Manager system of record

Completion date: 24 Jul 2025 (GMT)

Learning hours: 20 mins



Git hub link: -

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



THANK YOU

