#### **IBM INTERNSHIP PROJECT**

#### **LEARNMATE AI**

Al coach that builds and updates personalized learning paths based on skills and interests.

Presented By -

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#### **OUTLINE**

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



#### PROBLEM STATEMENT

Students often struggle to find the right learning path due to an overwhelming number of online resources and lack of personalized guidance.

#### **Proposed Solution:**

LearnMate is an agentic Al coach that interacts with students, understands their interests and skill levels, and builds a dynamic, evolving roadmap of courses aligned with their goals.



### TECHNOLOGY USED

- •IBM Cloud Lite Services
- •IBM Watsonx.ai Studio
- Granite Foundation Model
- •LangGraph Framework
- •ReAct Architecture (Reasoning + Acting)
- •IBM Cloud Functions
- •IBM Cloudant (for storing profiles & progress)



### **IBM CLOUD SERVICES USED**

- •Watsonx.ai Studio (LLM prompt design + deployment)
- •Watsonx.ai Agent Builder
- •Granite-13b-chat-v2 foundation model
- •IBM Cloudant (vector data storage)
- •IBM Cloud Functions (logic engine)



### **WOW FACTORS**

LearnMate significantly reduces the time and effort students spend navigating vast online learning resources. It enhances the quality of self-learning by providing structured, personalized roadmaps tailored to individual goals and skill levels. This Al-powered agent empowers learners with clarity, direction, and adaptability, fostering continuous upskilling and career alignment.

#### Unique features:

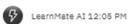
- Personalized course pathways based on interests, skill level, and career goals
- Real-time skill assessment and dynamic roadmap adjustments
- Al-curated course recommendations from trusted learning platforms
- Progress-aware learning plans that evolve with the user
- Domain-specific learning (e.g., Cybersecurity, Frontend Development, UI/UX)
- Roadmap regeneration based on completed tasks or updated preferences



## **END USERS**

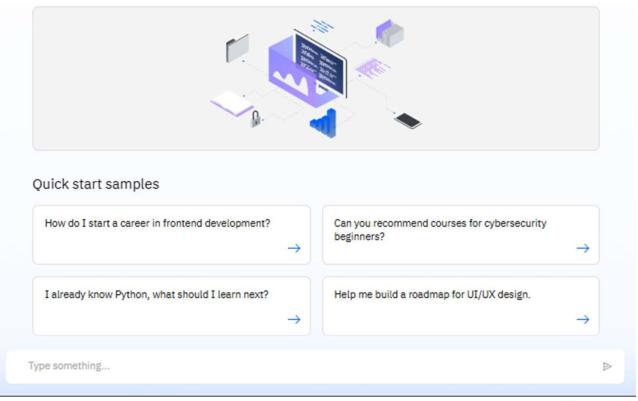
- Students and Self-learners
- Career Switchers
- Colleges and Universities
- EdTech Platforms





#### Welcome to LearnMate AI

I coach that builds and updates personalised learning paths based on skills and interests.







How do I start a career in frontend development?

LearnMate AI 12:08 PM

That's a great career choice! To start a career in frontend development, you'll need to build a solid foundation in HTML, CSS, and JavaScript. Here's a progressive learning roadmap:

- 1. HTML & CSS Basics: Start with understanding the structure of web pages using HTML and styling them with CSS.
  - Course Recommendation: "HTML & CSS for Beginners" on Coursera or "Learn HTML and CSS" on freeCodeCamp.
- Intermediate HTML & CSS: Once you're comfortable with the basics, move on to more advanced topics like responsive design, flexbox, and grid.
  - · Course Recommendation: "Responsive Web Design" on Udacity.
- JavaScript Fundamentals: Learn the core concepts of JavaScript, including variables, data types, functions, loops, and control structures.
  - · Course Recommendation: "JavaScript: Understanding the Weird Parts" on Udemy.
- ES6+ JavaScript: Familiarize yourself with modern JavaScript features like arrow functions, promises, async/await, and destructuring.
  - Course Recommendation: "Modern JavaScript Tutorial" on The Net Ninja's YouTube channel.

Type something...







N You 12:10 PM

Can you recommend courses for cybersecurity beginners?



Absolutely, I'd be happy to help you with that. To provide the best recommendations, I need to understand your current knowledge level in cybersecurity. Could you tell me if you have any prior experience or if you're starting from scratch?

N You 12:10 PM beginner

B LearnMate AI 12:10 PM

Great, as a beginner in cybersecurity, you'll want to start with foundational courses that cover the basics. Here's a suggested learning roadmap:

- Introduction to Computer Science and Programming: This will help you understand the basics of how computers work
  and how to write code, which is crucial in cybersecurity. You can find such courses on platforms like Coursera or edX.
- Cybersecurity Fundamentals: Once you have a grasp of basic computer science, you can move on to cybersecurity
  fundamentals. A course like "Introduction to Information Security" on Coursera by University of Maryland is a good starting
  point.
- 3. Network Security: Understanding how networks function and how to secure them is a key aspect of cybersecurity. A

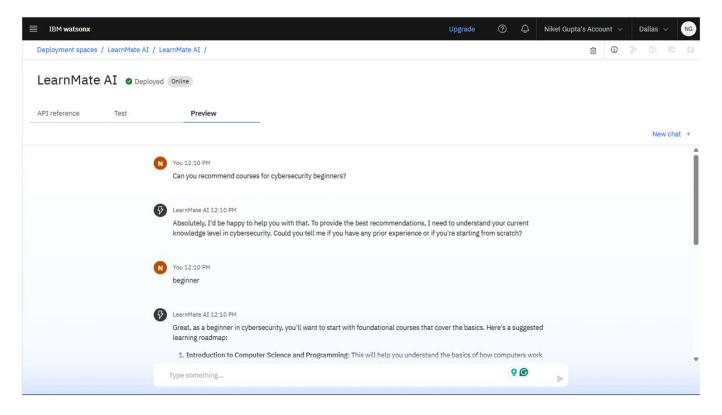
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#### Deployed AI Agent





#### CONCLUSION

- LearnMate enhances student learning experiences by providing structured, Al-curated course plans.
- It minimizes confusion, saves time, and empowers users to stay on track in their upskilling journey.



# **GITHUB LINK**

https://github.com/NiketGupta06/LearnMate-Al



### **FUTURE SCOPE**

- Voice-based interactions (multimodal agent)
- Integration with real APIs (Coursera, edX, etc.)
- Real-time progress tracking dashboard
- Memory-based personalization (long-term profile history)
- Support for regional languages



#### **IBM CERTIFICATIONS**

In recognition of the commitment to achieve professional excellence



# Niket Gupta

Has successfully satisfied the requirements for:

Getting Started with Artificial Intelligence



Issued on: Jul 19, 2025 Issued by: IBM SkillsBuild







#### IBM SkillsBuild

#### **Completion Certificate**



This certificate is presented to

Niket Gupta

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



# **THANK YOU**

Guiding learning paths with  ${\sf AI}-{\sf one}$  student at a time.

