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# CAPSTONE PROJECT

## TRAVEL AGENT

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# OUTLINE

- Problem Statement
- Technology used
- Wow factor
- End users
- Result
- Conclusion
- Git-hub Link
- Future scope
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# PROBLEM STATEMENT

Students and early-career professionals often face difficulty navigating the vast and unstructured landscape of online learning resources. With no personalized guidance or real-time support, they struggle to identify the right learning paths aligned with their goals, current skills, and interests, leading to confusion and inefficiency in skill development.

## Proposed Solution:

An agentic AI learning assistant named AIDA, built using IBM watsonx.ai and powered by a Granite foundation model, interacts with users to understand their interests, goals, and current skill levels. It dynamically constructs and refines personalized learning paths by recommending relevant courses, resources, and skill-building strategies. Through ongoing dialogue, AIDA adapts its guidance in real time, offering tailored support and motivation to help learners progress effectively.

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# TECHNOLOGY USED

- IBM cloud lite services - Free-tier access for building and deploying AI agents
- IBM Granite Foundation Model - Large language model for generating intelligent responses
- Natural Language Processing (NLP) - Allows the agent to understand and respond in natural language

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# IBM CLOUD SERVICES USED

- IBM Cloud Watsonx AI Studio – Build and Configure AI agent
- IBM Cloud Watsonx AI runtime – Deploy and test agents in real time
- IBM Cloud Agent Lab – Interface to manage agent behavior and tools
- IBM Granite foundation model – Powers natural and intelligent conversations

# WOW FACTORS

This agent helps learners cut through overwhelming course options, stay motivated, and follow a structured, goal-aligned path. It empowers students with personalized guidance, adapting continuously based on interaction.

## ■ Unique Features:

- Dynamic course recommendations based on interests and current skills
- Personalized learning paths generated through conversation
- Real-time adaptation and progress-aware suggestions
- Skill-based tool recommendations and portfolio-building tips
- Instruction-driven behavior with no coding required
- Motivational tone designed to guide and support learning

# END USERS

- High School & College Students

Looking for guidance on which courses and skills to pursue based on their interests.

- Early-Career Professionals

Exploring ways to upskill or transition into new tech domains through structured learning.

- Self-Learners & Career Changers

In need of personalized roadmaps instead of generic course lists.

- Academic Institutions & EdTech Platforms

Can integrate the agent to provide smart, adaptive learning support.

# RESULTS

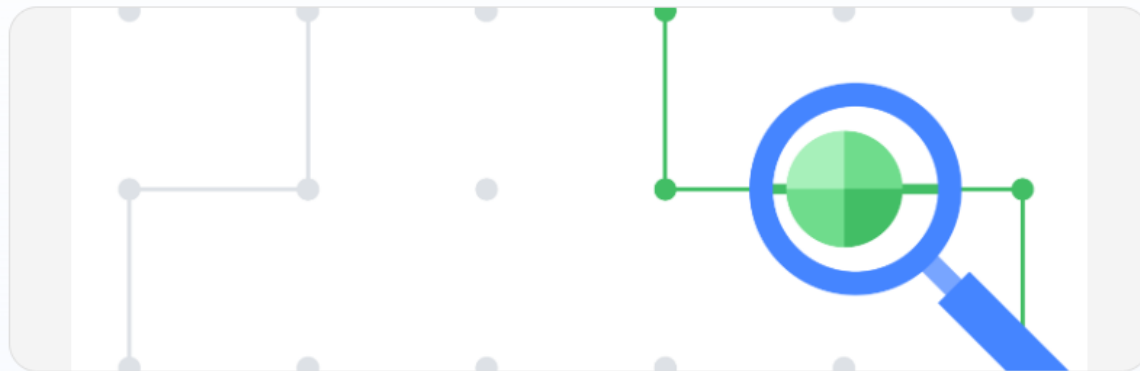
## Agent preview



AIDA 04:36 PM

### Welcome to AIDA

AIDA is an agentic AI coach that guides students by creating adaptive, goal-driven learning roadmaps



### Sample questions

What's the best learning path for becoming a frontend developer?



How do I switch from UI/UX design to cybersecurity?



Type something...





# RESULTS

## Agent preview



You: 04:37 PM

I'm interested in frontend development. Where should I start?



AIDA 04:37 PM

That's great! Frontend development is a fantastic field with lots of opportunities. Here's a personalized learning pathway to get you started:

1. **HTML & CSS Basics:** Start with understanding the structure of web pages using HTML (HyperText Markup Language) and styling them with CSS (Cascading Style Sheets).

- **Resources:**

- [freeCodeCamp's Responsive Web Design Certification](#)
- [Codecademy's Learn HTML course](#)

2. **JavaScript Fundamentals:** Learn JavaScript, the programming language that makes web pages interactive.

- **Resources:**

- [freeCodeCamp's JavaScript Algorithms and Data Structures Certification](#)
- [Mozilla Developer Network \(MDN\) JavaScript Guide](#)

Type something...



# RESULTS

## Agent preview

TO ASK.

► How did I get this answer?



You: 04:43 PM

Can you recommend some good tools or platforms to practice?



AIDA 04:43 PM

Absolutely! Here are some popular platforms and tools that can help you practice and enhance your frontend development skills:

1. **freeCodeCamp:** A completely free, interactive learning web platform that covers a wide range of topics in web development, including HTML, CSS, JavaScript, and more. It also includes a collaborative coding environment where you can work on projects with others. [freeCodeCamp](#)
2. **Codecademy:** An interactive platform that offers courses in various programming languages and technologies, including frontend development. It provides an in-browser coding environment for practice. [Codecademy](#)
3. **Udemy:** An online learning marketplace with a vast array of courses on frontend development, taught by industry experts. Many courses offer lifetime access, making it a great investment. [Udemy](#)
4. **Coursera:** Offers courses from top universities and institutions worldwide, including specializations in frontend web development. Some courses are free to audit, while others

Type something...



# RESULTS

## Deployed AI Agent

IBM watsonx Upgrade ? ? Parimal Ahire's Account Dallas PA

Deployment spaces / Deploy1 / AIDA /

AIDA ✓ Deployed Online

API reference Test **Preview**

New chat +

**P** You 04:45 PM  
I'm aiming for a career in UI/UX — how do I build a strong portfolio?

**AIDA** 04:45 PM  
To build a strong UI/UX portfolio, follow these steps:

- 1. Identify Your Niche:** Decide on the area of UI/UX you're most interested in, such as mobile app design, web design, or UX research. This focus will help you tailor your projects to showcase specific skills.
- 2. Complete Relevant Projects:** Start by working on personal projects or contribute to open-source projects. This hands-on experience is crucial. You can find project ideas on platforms like GitHub, Behance, or Dribbble.
- 3. Document Your Process:** Don't just show the final product. Document your design process, including sketches, wireframes, prototypes, and user testing. This demonstrates your problem-solving skills and design thinking.
- 4. Include Case Studies:** For each project, create a case study that outlines the problem, your solution, and the results. This

Type something...

dataplatfom.cloud.ibm.com/ml-runtime/deployments/.../chat?space\_id=eb997564-09e3-4c9...

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# CONCLUSION

- The solution highlights how agentic AI can transform the way learners receive guidance by delivering personalized, adaptive, and conversational support.
- Through natural interactions, the assistant understands user goals, recommends relevant learning paths, and continuously adapts to individual progress.
- Built on IBM Cloud Lite services with Granite foundation models, it offers a low-code, scalable approach to empower users with clear, goal-driven learning experiences.

# FUTURE SCOPE

- **Persistent User Profiles:**  
Implement login and user account functionality to retain learning history, preferences, and past conversations, enabling long-term personalized support.
- **Academic Data Integration:**  
Include additional inputs like academic performance, certifications, and resume details to further enhance the relevance and accuracy of learning path recommendations.
- **Dynamic Learning Path Updates:**  
Integrate external APIs (e.g., Coursera, edX, job market data) to allow AIDA to adapt roadmaps based on trending skills, course availability, and market demand.
- **Scalable Deployment:**  
Move beyond web preview and integrate AIDA into learning platforms, institutional portals, or mobile apps for broader adoption.

# IBM CERTIFICATIONS



# IBM CERTIFICATIONS

In recognition of the commitment to achieve  
professional excellence



## Parimal Ahire

Has successfully satisfied the requirements for:

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### Journey to Cloud: Envisioning Your Solution

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Issued on: Jul 18, 2025  
Issued by: IBM SkillsBuild

Verify: <https://www.credly.com/badges/1df0fd6e-2bf0-4b25-9193-16881caa461c>



# IBM CERTIFICATIONS

IBM **SkillsBuild**

Completion Certificate



This certificate is presented to

Parimal Ahire

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



## GITHUB LINK

GitHub link : <https://github.com/ParimalAhire/PathCraft-AIDA>



THANK YOU