SOFTWARE DEVELOPMENT

Capstone Project

CYBERSECURITY

DATA SCIENCE

FutureMap: Your personalized roadmap to success

Presented By:

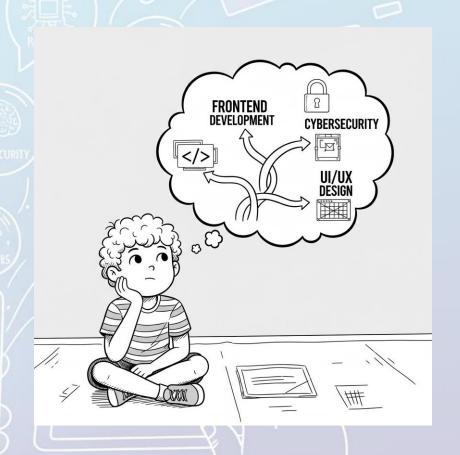
Kalyani Das

IT PROJECT

Institute of Technical Education and Research, Siksha 'O' Anusandhan Computer Science and Information Technology

Outline:

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



Problem Statement:

Students are overwhelmed by the sheer number of online courses and lack the personalized guidance needed to choose the right learning path. Without clear direction, they often waste time, lose motivation, or fail to reach their long-term goals.

Proposed Solution:

FutureMap solves this by acting as an Agentic AI coach that understands each student's interests and skill level, then builds a personalized, evolving course roadmap that adapts as they learn — making education efficient, focused, and goal-driven

Technologies:

• IBM cloud lite services

• Natural Language Processing (NLP)

• Retrieval Augmented Generation (RAG)

• IBM Granite model

IBM cloud services used:

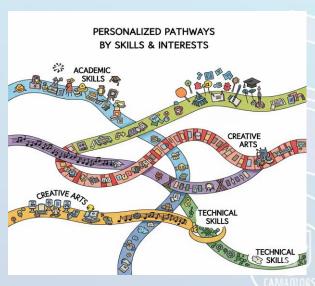
• IBM Cloud Watsonx AI Studio

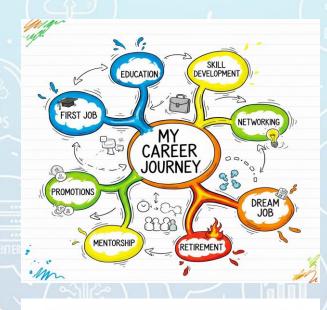
• IBM Cloud Watsonx AI runtime

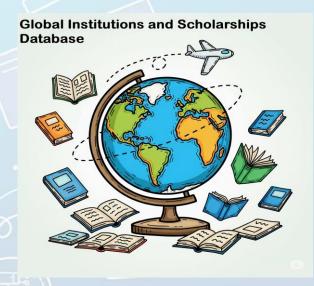
• IBM Cloud Agent Lab

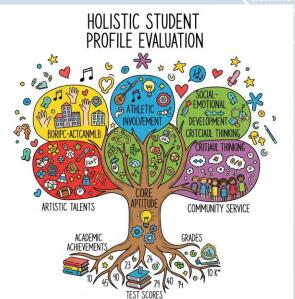
• IBM Granite foundation model

Wow Factors:





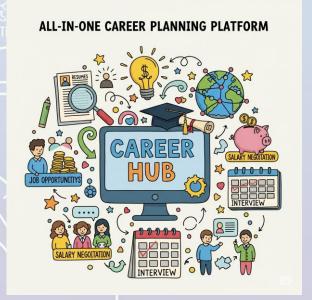












- Skill and Interest-Based Pathway Design
 FutureMap prioritizes a student's unique interests, skills, and prior knowledge to create a personalized and future-oriented learning path.
- Mind Map Generation
 Visualizes the student's complete journey from present skillset to future career, including alternate branches and decision points.
- Global Institutions and Scholarships Database
 Recommends global and Indian institutions offering the suggested courses, including those that provide scholarships if the student opts for it.
- Course Roadmap Adaptability
 Continuously updates the personalized roadmap with new courses or institutions as the student progresses or shifts focus.
- Holistic Student Profile Assessment
 Goes beyond academic marks to assess passion, soft skills, extracurriculars, and aptitude for better alignment with future goals.
- One-Stop Career Planning Platform
 Eliminates the need to search multiple sources by consolidating guidance, institutions, scholarships, exams, and planning tools in one place.

End Users:

Students

Seek personalized guidance for career paths, courses, colleges, and preparation plans.

Graduates

Explore upskilling or IT career shifts with suitable courses and scholarships.

Career Counselors Use FutureMap to offer AI-driven career suggestions and roadmaps.

Parents & Guardians

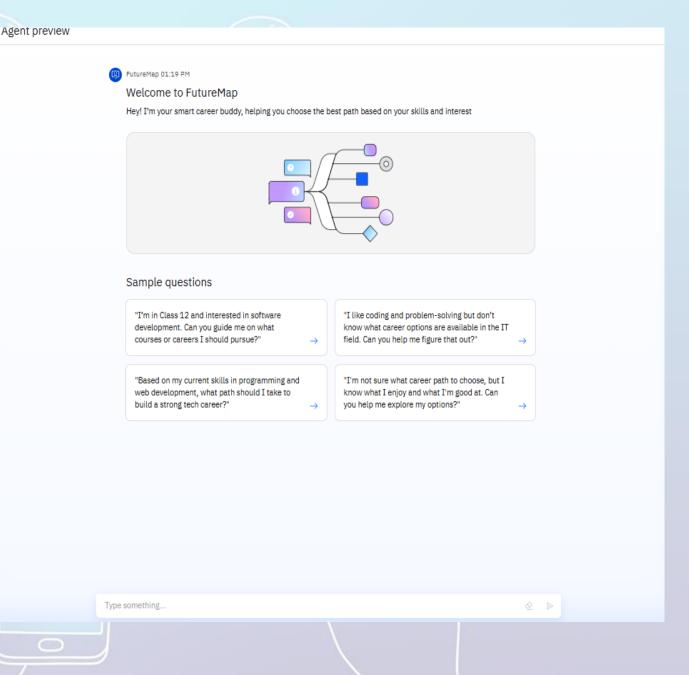
Support children in making smart, informed educational choices.

Educational Institutions

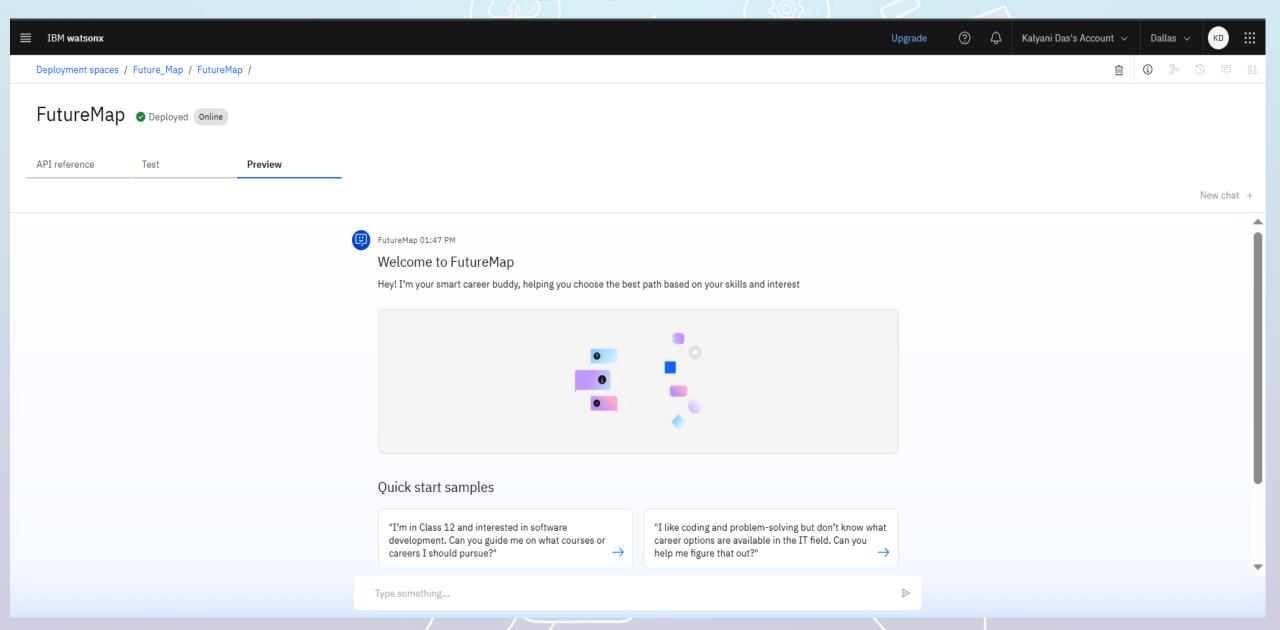
Integrate the tool for career counseling and student advisory services

Results:

- •Personalized Pathways: The system identifies tailored career and course options based on the user's interests, skills, and knowledge.
- •Informed Decisions: It provides institution lists, fee structures, scholarships, and entrance exam suggestions for clear, actionable choices.
- •Visual Career Map: Generates an interactive mind map outlining the user's academic and professional journey ahead.



Deployment:











API reference

Test

Preview

New chat +



"I'm not sure what career path to choose, but I know what I enjoy and what I'm good at. Can you help me explore my options?"

FutureMap 01:47 PM

Hi, I am your Career Companion. How can I help you?

To guide you best, tell me what activities or tasks do you enjoy doing and where do you feel most confident in your abilities. Do they lean more towards problem-solving, creativity, analysis, teaching others, managing projects or something else entirely?

You 01:48 PM creativity

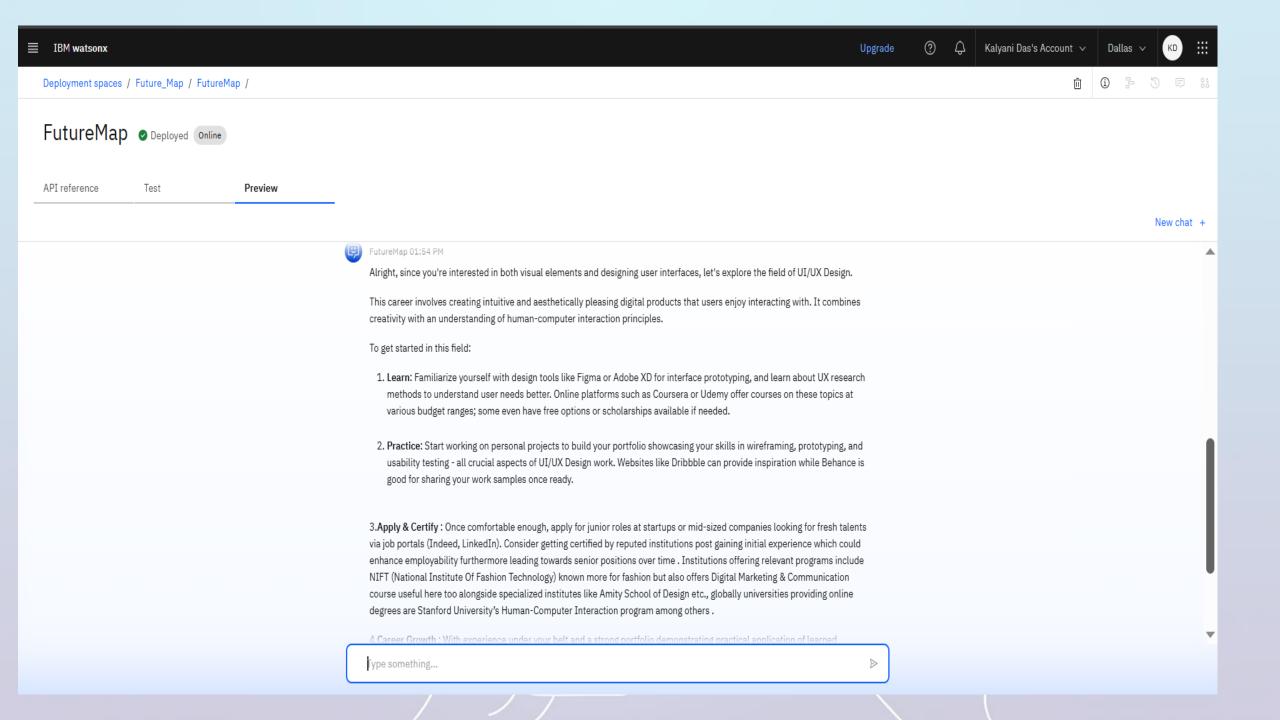
FutureMap 01:48 PM

That's great! Creativity often aligns well with fields like UI/UX Design, Graphic Design, Content Writing, and even Video Game Design.

To narrow it down further: Do you prefer working with visual elements or text-based content? Are you more interested in designing user interfaces for software applications or creating aesthetic graphics?

Type something...





Conclusion:

- The agent can guide users through career decisions, suggest personalized pathways, and even draft preparation plans.
- It reduces effort by automating research, comparing institutions, and highlighting scholarships.
- FutureMap enhances clarity, accessibility, and confidence in career planning across diverse user needs.

Future Scope:

- Multilingual Support: Enable career guidance in regional languages for wider accessibility.
- Voice Interaction: Integrate voice-based Q&A for a conversational experience.
- Real-Time Collaboration: Allow students, parents, and counselors to explore options together.
- Gap Identification: Detect gaps in skills and suggest trending or emerging career paths.
- Integration with EdTech Platforms: Sync with learning platforms for direct course enrollment.
- Scholarship Matching Engine: Continuously update and match users with relevant global scholarships.

IBM Certifications:

In recognition of the commitment to achieve professional excellence



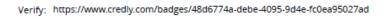
Kalyani Das

Has successfully satisfied the requirements for:

Getting Started with Artificial Intelligence



Issued on: Jul 16, 2025 Issued by: IBM SkillsBuild





IBM SkillsBuild

Completion Certificate



This certificate is presented to

Kalyani Das

for the completion of

Lab: Retrieval Augmented Generation with LangChain

(ALM-COURSE_3824998)

According to the Adobe Learning Manager system of record

Completion date: 19 Jul 2025 (GMT)

Learning hours: 20 mins

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