IBM AICTE PROJECT

CAREER COMPANION

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OUTLINE

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PROBLEM STATEMENT

Students often face difficulty making informed career decisions due to fragmented access to guidance, limited awareness of personal strengths, and rapidly evolving job markets. Traditional counseling systems lack personalization, scalability, and real-time adaptability — leading to mismatches in career paths, underutilized potential, and future regret.

Proposed Solution:

The Career Companion will use Natural Language Processing (NLP) to address the lack of personalized and scalable career guidance that autonomously supports students in making informed, future-ready career decisions with much ease.



TECHNOLOGY USED

- IBM cloud lite services
- Natural Language Processing (NLP)
- Retrieval Augmented Generation (RAG)
- IBM Granite model



IBM CLOUD SERVICES USED

- IBM Cloud Watsonx Al Studio
- IBM Cloud Watsonx Al runtime
- IBM Cloud Agent Lab
- IBM Granite foundation model



WOW FACTORS

The AI-powered career counseling agent stands out by delivering real-time, personalized guidance tailored to each student's strengths, interests, and academic data.

Unique Features:

- Offers multiple tailored career paths like "Safe", "High-Growth", and "Bold" options.
- Shows 3–5 year career projections including roles, effort level, skills, and ROI.
- Ensures fair, supportive suggestions regardless of background or career choice.

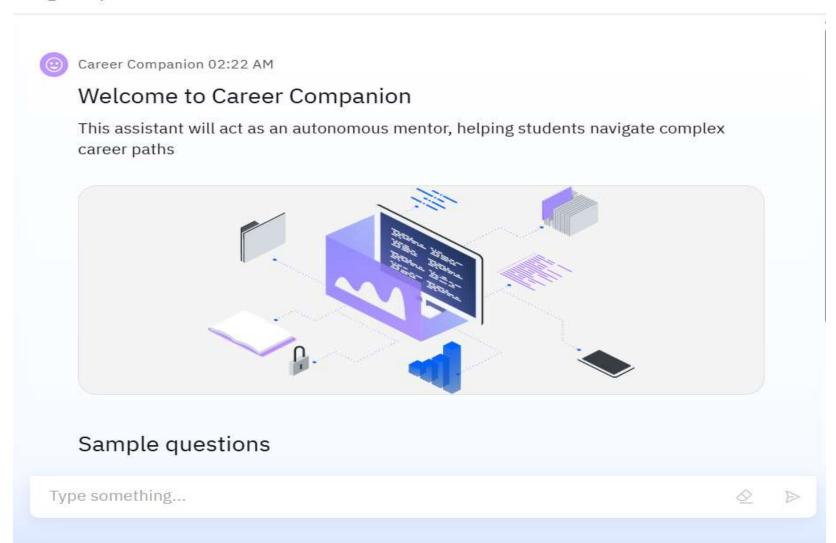


END USERS

- College/University Students
- Educational Institutions and Universities
- Teachers and Mentors
- EdTech Platforms



Agent preview





 Tracks changes in performance and adjusts recommendations in real time—no manual intervention needed.

 Supports traditional, emerging, and unconventional careers with structured advice and inspiration.

 Providing solutions based on carrier related querries making it popular among young masses.

Agent preview



You: 02:31 AM

What are the best carrier options for me after my 12th grade?



Career Companion 02:31 AM

Hi there! To give you the best advice, I need a bit more information about your interests and strengths. However, I can provide a general overview of popular career paths typically considered after 12th grade. Here are three potential options:

- STEM Fields (Science, Technology, Engineering, and Mathematics): These fields are
 often in high demand due to technological advancements. Options include Computer
 Science, Engineering (Mechanical, Electrical, Civil, etc.), Biology, Chemistry, Physics,
 and Mathematics.
- Business and Management: If you're interested in entrepreneurship, management, or finance, you might consider Business Administration, Accounting, or Marketing.
- Healthcare: With an aging population, healthcare professionals are always in demand. You could explore Nursing, Pharmacy, Medical Laboratory Technology, or Public Health.

Type something...







 Encourages strengths, suggests alternative routes when needed, and reduces confusion through supportive guidance.

 Using Al-driven insights, it offers scenariobased recommendations, highlights industryaligned skills, and provides actionable learning goals.

Agent preview



You: 02:36 AM

Which career paths offer high growth and salary potential?



Career Companion 02:36 AM

To provide you with the most accurate information, I'll need to look into current job market trends. Here's what I found using recent data from various sources:

- Data Science and Analytics: With the exponential growth of data, professionals skilled in data analysis, machine learning, and AI are in high demand. The median salary for data scientists in the U.S. is around \$113,000, according to the Bureau of Labor Statistics.
- Cybersecurity: As businesses increasingly rely on digital platforms, the need for
 cybersecurity experts to protect sensitive information grows. The average salary for
 information security analysts is approximately \$103,590 per year in the U.S., as
 reported by the BLS.
- 3. **Healthcare Professionals**: Roles such as physician assistants, nurse practitioners, and physical therapists are projected to see significant growth due to an aging population and advancements in medical technology. Salaries vary widely but can

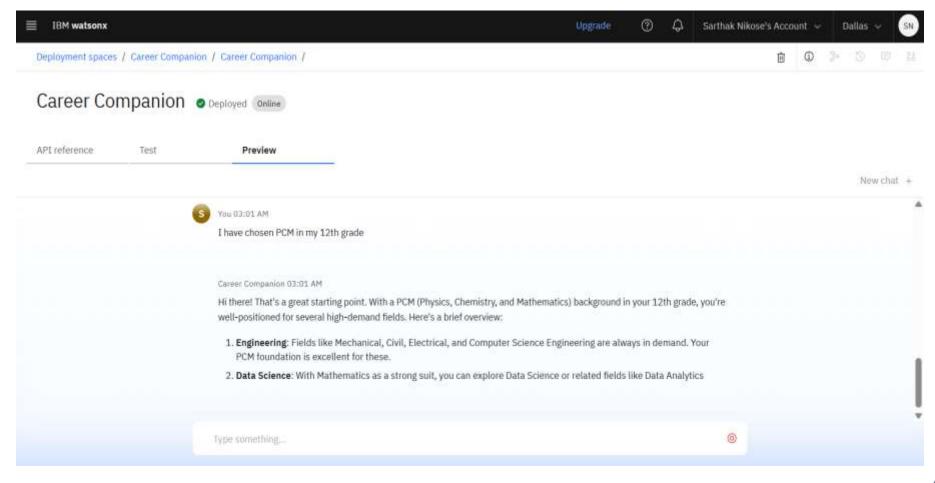
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Deployed Career Companion Al Agent





CONCLUSION

- The Career Companion AI revolutionizes traditional career counseling by offering personalized, adaptive, and data-driven guidance.
- It empowers students to make informed, confident decisions aligned with their strengths, goals, and market trends.
- This agent is not just a tool it's a smart companion for every learner's journey to success.



GITHUB LINK

Github Link: https://github.com/Sarthaknikose/Carrier-Companion



FUTURE SCOPE

- Integration with Real-Time Job Market APIs
- Enhanced Personalization with Emotional AI
- Predictive Success Modeling
- Collaboration with Industry Mentors & Recruiters
- Integration with Learning Platforms



IBM CERTIFICATIONS

In recognition of the commitment to achieve professional excellence



Sarthak Nikose

Has successfully satisfied the requirements for:

Getting Started with Artificial Intelligence



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

Verify: https://www.credly.com/badges/a5ae7bb6-e1b3-4723-b97c-53a49d8f916f





IBM SkillsBuild

Completion Certificate



This certificate is presented to

Sarthak Nikose

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



THANK YOU

