
IBM AICTE PROJECT

AGENTIC CAREER COUNSELLOR

Presented By:

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OUTLINE

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PROBLEM STATEMENT

Many students struggle with choosing the right career path due to fragmented guidance, lack of awareness about their strengths, and ever-changing job markets. Traditional counseling is manual, limited in reach, and lacks personalization.

Proposed Solution:

An AI-powered career counseling agent that leverages IBM Granite Foundation Models and RAG to provide personalized career guidance based on academic interests, strengths, and labor market trends.

TECHNOLOGY USED

IBM Cloud Lite services

IBM Watsonx Prompt Lab

Retrieval Augmented Generation (RAG)

IBM Granite model

LLM inferencing SDK (watsonx.ai)

IBM CLOUD SERVICES USED

- IBM Watsonx AI Prompt Lab
- IBM Watsonx AI Runtime
- IBM Cloud Object Storage
- IBM Agent

WOW FACTORS

- Semantic Career Matching:

Maps student interests and strengths to career roles using intelligent prompt-based reasoning.

- Auto-Summarized Role Insights:

Provides concise overviews of recommended careers, including skill requirements, future trends, and next steps.

- Real-Time Trend Awareness:

Integrates labor market trends to guide students toward in-demand and future-proof roles.

- Dynamic Q&A Support:

Interacts conversationally to resolve personalized career queries, replicating the role of a live counsellor.

- Pathway Alignment:

Suggests relevant courses, internships, and certifications tailored to the student's chosen path.

- Built with IBM watsonx.ai and Granite Foundation Models

Utilizes Prompt Lab and vector-grounded knowledge to deliver contextual, high-quality responses.

END USERS

- High School & College Students
- Educational Institutions
- Career Counsellors & Coaches
- Parents & Guardians
- Policy Makers & Education Boards

RESULTS

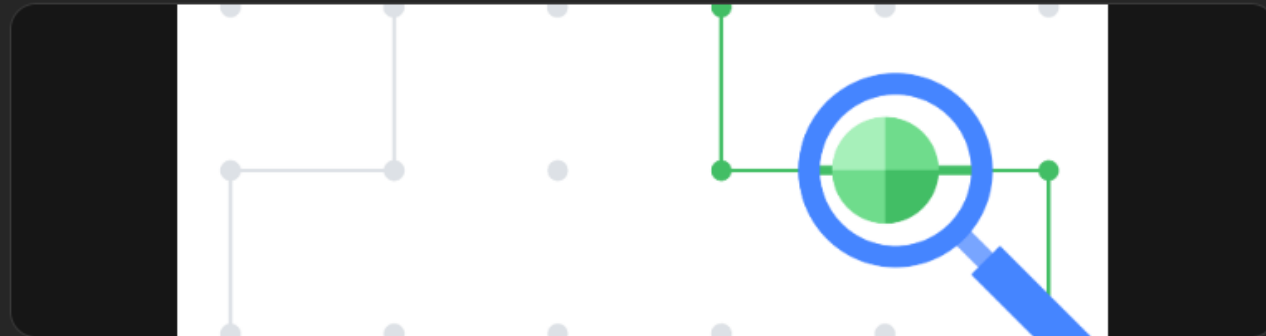
Agent preview



AGENTIC CAREER COUNSELLOR 10:14 PM

Welcome to AGENTIC CAREER COUNSELLOR

Welcome! I assist students about their career. monitor their interest and give career suggestions



Type something...



RESULTS

Build >

Agent preview

VN

You: 10:06 PM

How do I write a good resume for a fresher?

AGENTIC CAREER COUNSELLOR

10:06 PM

To write a good resume for a fresher, follow these steps:

1. **Contact Information:** Start with your name, phone number, email, and LinkedIn profile (if any).

2. **Objective Statement:** Write a brief, clear statement about the job you're seeking and how you can contribute to the company.

3. **Education:** List your degrees in reverse chronological order. Include the name of the institution, dates of attendance, and degree obtained.

4. **Skills:** Highlight both hard and soft skills relevant to the job you're applying for.

5. **Internships/Work Experience:** Even as a fresher, if you have completed any internships, mention them. Include the company name, your role, and responsibilities along with achievements.

6. **Projects:** If you have worked on any notable projects, include them. This can showcase your practical skills and knowledge.


7. **Certifications:** List any relevant certifications you may have.

8. **Format and Length:** Keep it concise (1-2 pages) and use a clean, professional format. Make sure it's easy to read with clear headings and bullet points.

9. **Proofread:** Check for any spelling or grammatical errors.

Type something...

RESULTS

 You: 10:16 PM

What skills should I learn for a career in AI?

 AGENTIC CAREER COUNSELLOR 10:16 PM

To pursue a career in Artificial Intelligence (AI), you should focus on developing a combination of technical and soft skills. Here are some key areas to consider:

1. **Programming:** Proficiency in languages such as Python, R, Java, or C++ is essential. Python is particularly popular in the AI community due to its simplicity and the availability of AI-related libraries.
2. **Mathematics:** A strong foundation in Linear Algebra, Calculus, Probability, and Statistics is crucial for understanding and implementing AI algorithms.
3. **Machine Learning:** Familiarize yourself with machine learning concepts and algorithms, including supervised and unsupervised learning, reinforcement learning, and neural networks.
4. **Deep Learning:** Learn about deep learning frameworks like TensorFlow and PyTorch, and understand concepts such as Convolutional Neural Networks (CNNs) and Recurrent Neural Networks (RNNs).
5. **Data Modeling:** Skills in data modeling, data mining, and data pre-processing are important for preparing data for AI models.
6. **Big Data Platforms:** Experience with big data platforms like Hadoop, Spark, or Hive can be beneficial, as AI often deals with large datasets.
7. **Cloud Platforms:** Familiarity with cloud services such as AWS, Google Cloud, or Azure can be advantageous, as many AI applications are deployed on these platforms.
8. **Soft Skills:** Communication, problem-solving, and critical thinking skills are also important for collaborating with teams and explaining complex AI concepts to non-technical stakeholders.

To stay updated with the latest trends and tools in AI, consider following relevant publications, attending webinars, and participating in online forums or communities.

For more specific information, you can use the RAGQuery function to refer to any internal career guidance documents or external resources I have access to.

► How did I get this answer?



type something...



RESULTS

VN You: 10:17 PM

What should I do next after Class 12?

 AGENTIC CAREER COUNSELLOR 10:17 PM

After Class 12, your next steps depend on your interests and career goals. Here are some common paths:

1. **Higher Education:** Pursue a bachelor's degree in a field that interests you. Popular choices include engineering (Computer Science, Electronics, Mechanical), mathematics, statistics, economics, or psychology.
2. **Vocational Courses:** Consider short-term vocational courses or diplomas in specific areas like IT, healthcare, hospitality, or design.
3. **Internships:** Look for internships in your desired field to gain practical experience and make industry connections.
4. **Entry-Level Jobs:** If you're confident in your skills, you might apply for entry-level positions. This can provide work experience while you continue your education.
5. **Gap Year:** Some students choose to take a gap year to explore their interests, work, or volunteer.

To make a more informed decision, consider the following:

- Your academic performance and subjects you enjoyed/excelled in.
- Your interests and passions.
- Current labor market trends and in-demand skills.
- Personal circumstances and financial situation.

You can use the DuckDuckGo or Wikipedia function to research specific colleges, courses, or industries. The GoogleSearch function can help you find current trends and labor market information.

Remember, there's no one-size-fits-all answer, and it's okay to change your mind or explore different options.

► How did I get this answer?



Type something...



CONCLUSION

- The **Agentic Career Counsellor** harnesses the power of AI and IBM Watsonx to deliver intelligent, personalized, and scalable career guidance.
- By integrating real-time labor market trends, academic insights, and individual student preferences, this solution transforms traditional counselling into a proactive, data-driven experience.
- It empowers students to make confident, future-ready decisions while reducing dependency on manual intervention and fragmented information sources.
- **Outcome:** A reliable, always-available digital advisor that bridges the gap between education and industry through actionable career pathways.

GITHUB LINK

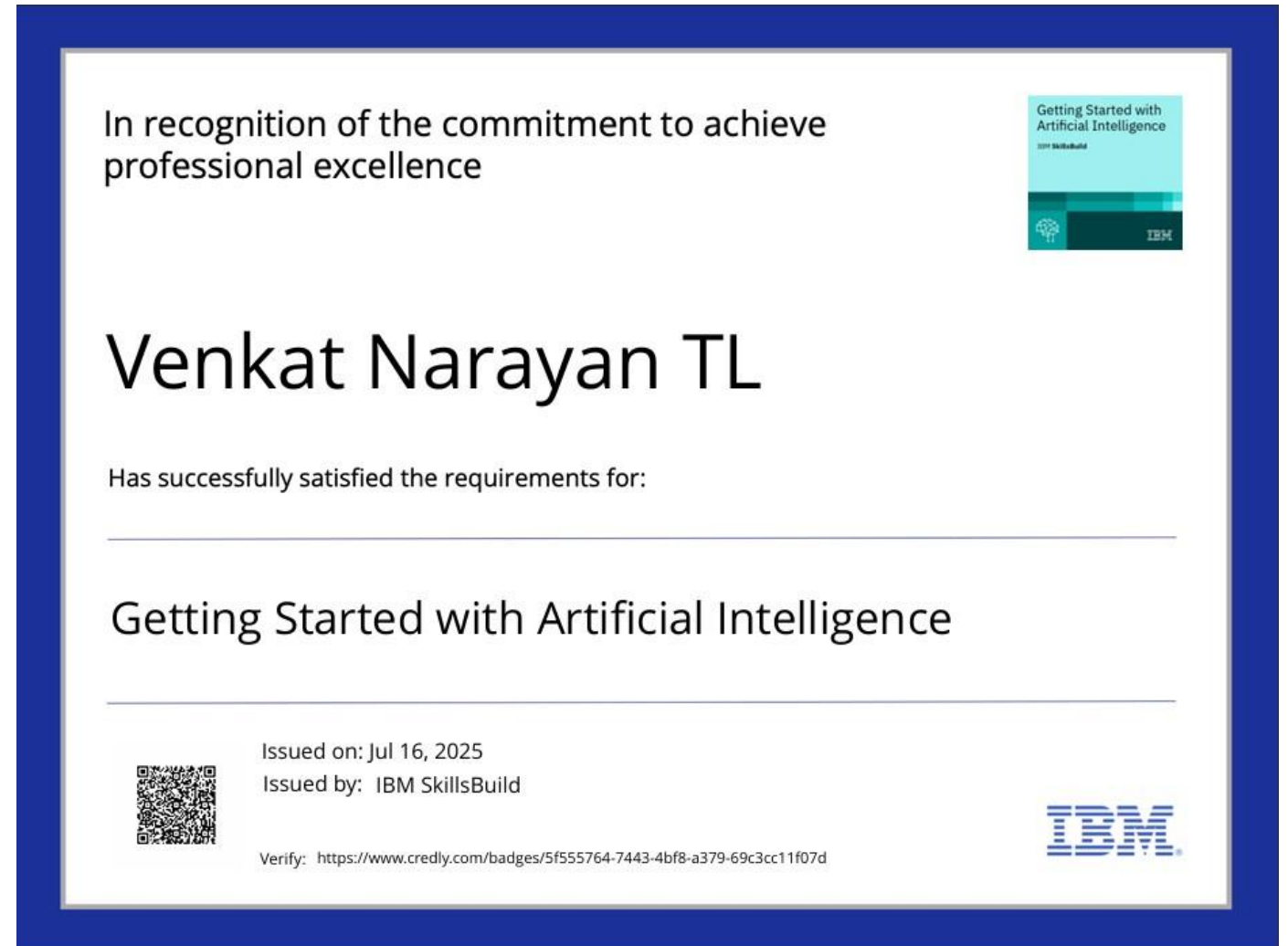
- <https://github.com/venkatnarayantl/AgenticCareerCounsellor>

FUTURE SCOPE

- Integration with Student Portals and LMS Platforms
- Multi-language Support
- Real-time Labor Market Insights
- Voice-based Interaction
- AI-Driven Career Simulations
- Parental and Teacher Dashboards
- Ethical and Bias Auditing

IBM CERTIFICATIONS

- Screenshot/
- credly certificate(getting started with AI)



Attach your RAG LAB certificate here





THANK YOU