
CAPSTONE PROJECT

AGENTIC CAREER COUNSELING COMPANION

Presented By:

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OUTLINE

- **Problem Statement** (Should not include solution)
- **Proposed System/Solution**
- **System Development Approach** (Technology Used)
- **Algorithm & Deployment**
- **Result (Output Image)**
- **Conclusion**
- **Git-hub link**
- **Future Scope**
- **References**

PROBLEM STATEMENT

- Students face challenges in making informed career decisions due to:
- Fragmented guidance systems
- Lack of self-awareness about strengths
- Rapidly evolving job markets
- Traditional methods lack personalization and scalability.

PROPOSED SOLUTION

- An autonomous AI-powered agent to guide students in career planning.
- Analyzes academic strengths, interests, and job market trends.
- Provides real-time, personalized career suggestions.
- Powered by IBM Cloud, IBM Granite LLM, and job trend APIs.

SYSTEM APPROACH

- An autonomous AI-powered agent to guide students in career planning.
- Analyzes academic strengths, interests, and job market trends.
- Provides real-time, personalized career suggestions.
- Powered by IBM Cloud, IBM Granite LLM, and job trend APIs.

ALGORITHM & DEPLOYMENT

- 1. Collect student academic data, skills, interests.
- 2. Analyze input with IBM Granite for pattern matching.
- 3. Fetch job trends via API (LinkedIn, Naukri, etc.).
- 4. Recommend career paths and skills to develop.
- 5. Deploy application and chatbot on IBM Cloud Lite.

RESULTS

The screenshot displays the Watsonx Agent Build interface. The top navigation bar includes the breadcrumb "Projects / Bonthala's sandbox / watsonx Agent", a "Share feedback" link, an "Autosaved 10:39 PM" status, and buttons for "New agent +", "Deploy", and a settings icon. The main interface is split into two panels: "Build" on the left and "Agent preview" on the right.

The "Build" panel contains three sections:

- Instructions:** A text area with the instruction: "You are a helpful assistant that uses tools to answer questions in detail. When greeted, say 'Hi, I am watsonx.ai agent. How can I help you?'". A link for "Advanced configuration" is visible.
- Knowledge:** A section with a "Clear chat" link and a text input field containing "[RPM_Project.pdf]". Below it, a note states: "If you want to add a vector index to the agent, click the agent preview chat".
- Tools:** A section with two buttons: "Add a tool" and "Create custom tool". Below this, a list of "Added tools (0)" shows "Google search" with a settings icon and a trash icon.

The "Agent preview" panel shows a chat history:

- A user message (green bubble) at 10:40 PM: "hi".
- An agent response (black bubble) at 10:40 PM: "Hi, I am watsonx.ai agent. How can I help you?". Below the response is a link: "► How did I get this answer?".

At the bottom of the chat preview is a text input field with the placeholder "Type something..." and a send button.

RESULTS

The screenshot displays the Watsonx Agent Build interface. The top navigation bar includes 'Projects / Bonthala's sandbox / watsonx Agent', 'Share feedback', 'Autosaved 10:41 PM', 'New agent +', and a 'Deploy' button. The main interface is split into two panels: 'Build' on the left and 'Agent preview' on the right.

Build Panel:

- Instructions:** A text box containing the instruction: "You are a helpful assistant that uses tools to answer questions in detail. When greeted, say 'Hi, I am watsonx.ai agent. How can I help you?'". A link for 'Advanced configuration' is visible.
- Knowledge:** A section with a 'Clear chat' link and a list of documents. One document is visible: 'BPM_Project.pdf'. A note below states: "If you want to add a whole index to the agent, click the agent preview chat".
- Tools:** A section with two buttons: 'Add a tool' and 'Create custom tool'.
- Added tools (5):** A list of tools, with 'Google search' being the first one.

Agent preview Panel:

This panel shows a chat history with the following messages:

- User (10:40 PM):** "can u give suggestions how to grow in career"
- watsonx Agent (10:40 PM):** "Sure, I can help with that. Could you please provide more details about your current role, industry, and specific areas you're interested in for career growth? This information will help me tailor the suggestions to your needs."
▶ How did I get this answer?
- User (10:41 PM):** "currently my role is a student pursuing B-Tech"
- watsonx Agent (10:41 PM):** "Great! Here are some general suggestions for career growth as a B-Tech student:"
 - 1. Internships and Co-ops:** Gain practical experience through internships and co-op programs. These opportunities can provide valuable insights into the industry and help you build a professional network.
 - 2. Skill Development:** Focus on developing both technical and soft skills. Technical skills might

At the bottom of the chat history is a text input field with the placeholder "Type something..." and a send button.

RESULTS

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Build Panel:

- Instructions:** A text box containing the instruction: "You are a helpful assistant that uses tools to answer questions in detail. When greeted, say 'Hi, I am watsonx.ai agent. How can I help you?'". A link for 'Advanced configuration' is visible.
- Knowledge:** A section with a 'Clear chat' link and a text input field containing 'IBM Project pqr'.
- Tools:** A section with two buttons: 'Add a tool' and 'Create custom tool'.
- Added tools (5):** A list showing 'Google search' as an added tool.

Agent preview Panel:

- User:** A message at 10:42 PM asking "how to set goals".
- watsonx Agent:** A response at 10:42 PM stating: "Setting clear and achievable goals is crucial for career growth. Here are some steps to help you set effective goals:".
- Steps:**
 - 1. Self-Assessment:** Reflect on your strengths, weaknesses, interests, and values. Understanding yourself will help you set goals that align with your aspirations and capabilities.
 - 2. SMART Goals:** Use the SMART framework to set your goals. SMART stands for Specific, Measurable, Achievable, Relevant, and Time-bound.
 - Specific:** Clearly define what you want to achieve.
 - Measurable:** Establish criteria to measure your progress.
 - Achievable:** Ensure your goals are realistic and attainable.
 - Relevant:** Set goals that are relevant to your career aspirations.
 - Time-bound:** Set a deadline for achieving your goals.
 - 3. Short-Term and Long-Term Goals:** Break down your goals into short-term and long-term

At the bottom of the chat, there is a text input field with the placeholder text "Type something..." and a send button.

RESULTS

The screenshot displays the 'Build' interface for a Watsonx Agent. The top navigation bar includes 'Projects / Bonthala's sandbox / watsonx Agent', 'Share feedback', 'Autosaved 10:43 PM', 'New agent +', and a 'Deploy' button. The main interface is divided into two panels: 'Build' on the left and 'Agent preview' on the right.

Build Panel:

- AI Model:** mistral-large
- Instructions:** You are a helpful assistant that uses tools to answer questions in detail. When greeted, say "Hi, I am watsonx.ai agent. How can I help you?"
- Knowledge:** L0M_Project.pdf
- Tools:** Add a tool, Create custom tool
- Added tools (5):** Google search

Agent preview Panel:

- 4. Prioritize:** Prioritize your goals based on their importance and urgency. Focus on the most critical goals first.
- 5. Action Plan:** Create an action plan for each goal. Break down the goal into smaller, manageable tasks and set deadlines for each task.
- 6. Track Progress:** Regularly review your progress and adjust your goals as needed. Celebrate your achievements and learn from any setbacks.
- 7. Seek Feedback:** Get feedback from mentors, peers, or supervisors. Their insights can help you refine your goals and stay on track.
- 8. Stay Flexible:** Be open to adjusting your goals as your interests and circumstances change. Career paths are not always linear, and flexibility can lead to new opportunities.

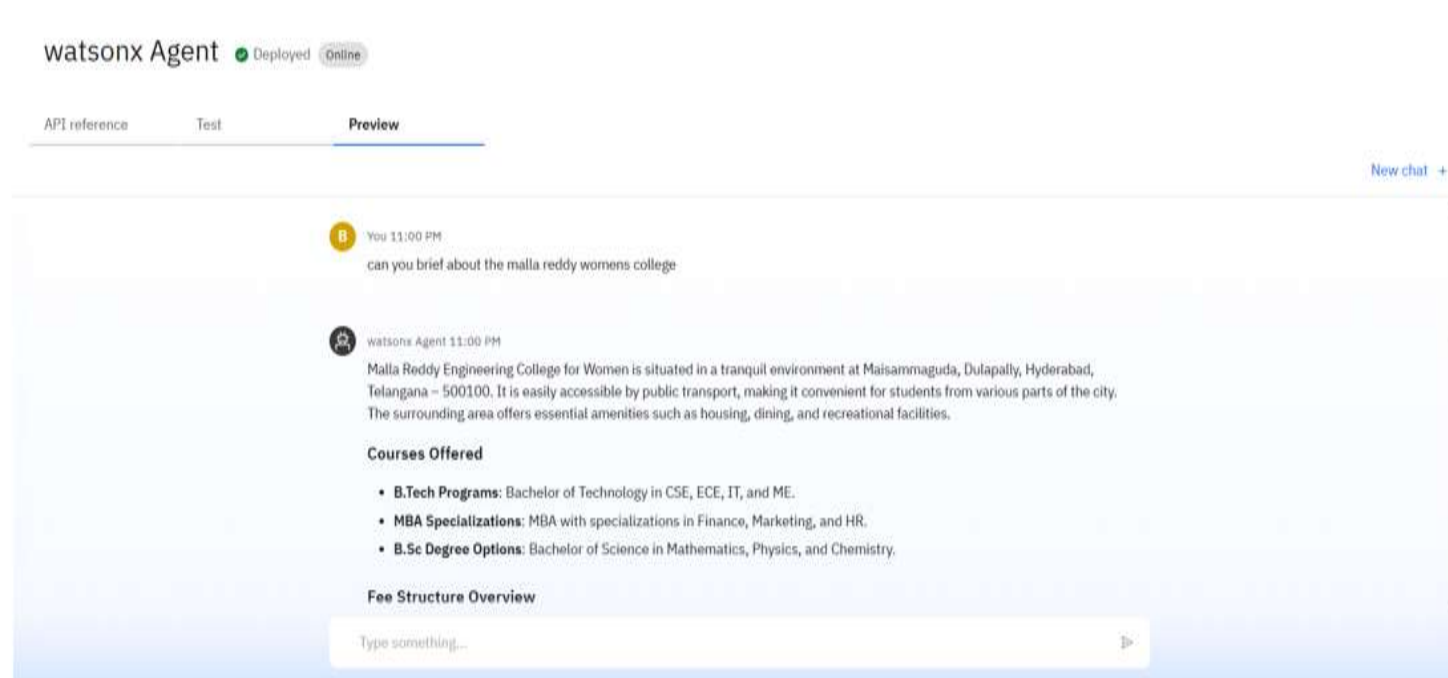
Would you like more specific advice or examples of setting career goals?

► how did I get this answer?

Type something...

RESULTS

Deployed AI agent



CONCLUSION

- The system provides scalable, intelligent career guidance.
- Helps students identify suitable career paths confidently.
- Reduces manual intervention while improving decision quality.
- Ensures alignment between skills, interests, and market demand.

GIT-HUB LINK

- **GitHub Repository:**

All project files (PPT, Vector Index document, screenshots, and deployment link) are available at:

<https://github.com/Anusha-236/Agentic-career-counseling-companion.git>

FUTURE SCOPE

- Integrate AR/VR for immersive career demos
- Blockchain for secure certificate validation
- Deeper analytics with psychometric tests
- National-level education system integration

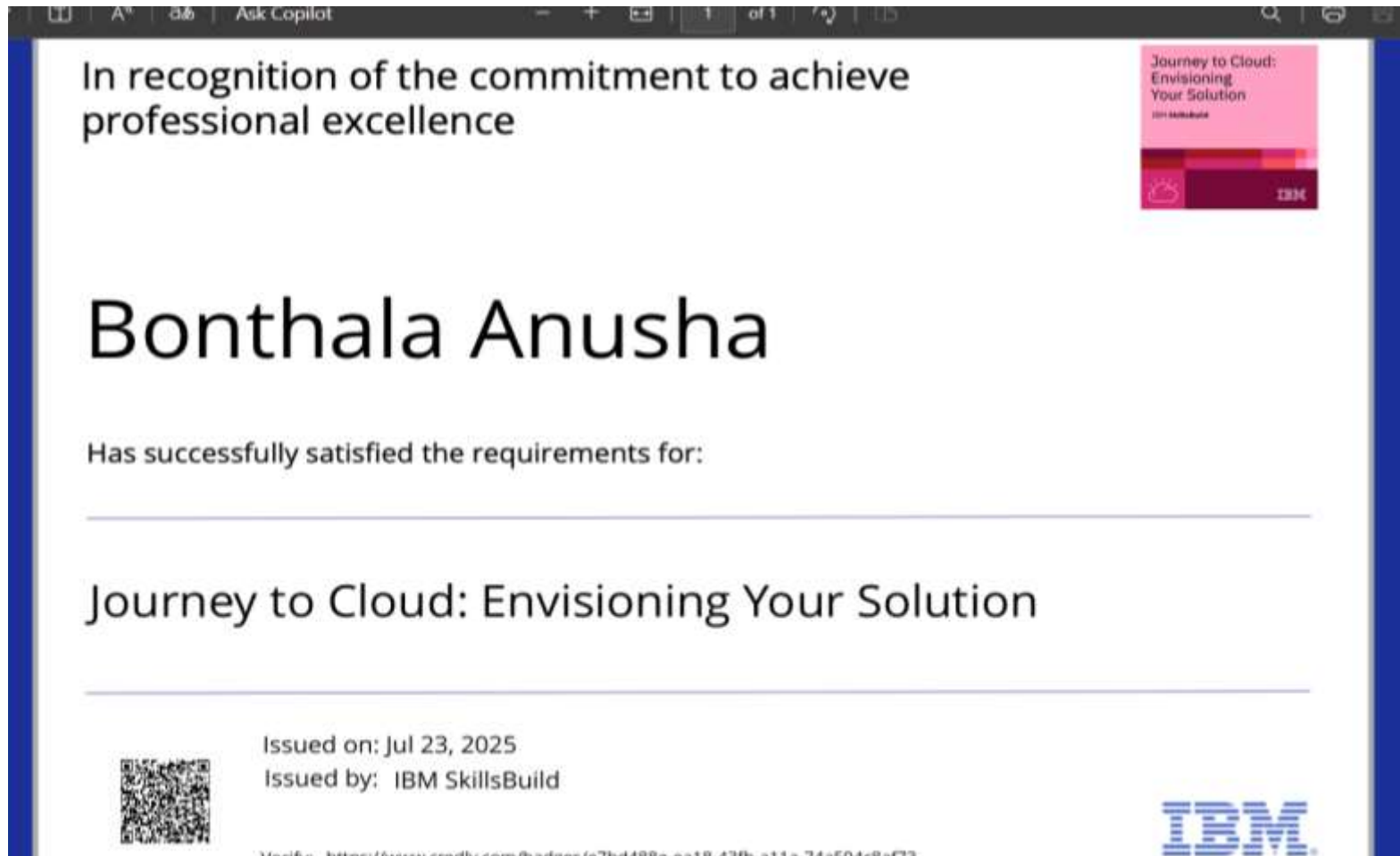
REFERENCES

- IBM Cloud: <https://www.ibm.com/cloud>
- IBM Granite: <https://www.ibm.com/watsonx/granite>
- LinkedIn & Naukri job APIs
- Educational Psychology Research Articles

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THANK YOU