

# IBM AICTE PROJECT

## AI CAREER COUNSELOR RURAL YOUTH

Presented By: NUTHPALLY APOORVA

Student name : NUTHPALLY APOORVA

College Name & Department : Mallareddy Institute of Engineering  
and Technology [CSE]

# OUTLINE

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# PROBLEM STATEMENT

The Challenge - Youth in rural areas often lack access to structured career guidance due to limited exposure,

absence of professional counselors, and poor awareness of skill development opportunities. Many students are unaware of job-oriented courses, government schemes, or online training platforms that could

help them build a career aligned with their interests.

Traditional methods of career counseling are not scalable and fail to reach underserved communities, contributing to skill mismatch, underemployment, and loss of potential.

There is a strong need for a smart, localized, and accessible solution that can provide personalized career

guidance to rural youth based on real-time, trusted information.

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# TECHNOLOGY USED

- IBM cloud lite services
- IBM Watson Assistant
- IBM Cloud
- Language Translator
- IBM Granite model
- Testing Tools

# ALGORITHM:

## 1. Natural Language Processing (NLP):

- Used by **IBM Watson Assistant** to understand and respond to user queries
- Processes **user inputs in regional languages** (via Language Translator)
- Extracts **intents** (e.g., "I want a job") and **entities** (e.g., "B.Tech", "Skill India")

## 2. Rule-Based Dialog Management:

- Predefined **dialog flows** guide the user through structured conversations
- Helps users choose education level, interests, and get career suggestions

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# IBM CLOUD SERVICES USED

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

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# WOW FACTORS

## 1. Multilingual Support

Supports **regional languages** like Telugu, Hindi, etc.

Makes career guidance accessible to rural youth who are not fluent in English

## 2. 24/7 Availability

Provides **instant career guidance anytime, anywhere**

No need for physical appointments or internet-savvy users

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# END USERS

- Rural Students (Class 10th, 12th, and Graduates) Research Institutions and Universities
- Parents and Guardians
- Unemployed/Underemployed Youth
- School Teachers and Village Educators



# RESULTS

The screenshot displays the IBM Watson Assistant Lite interface in a web browser. The browser's address bar shows the URL: <https://eu-gb.assistant.watson.cloud.ibm.com/crm%3Av1%3Abluemix%3Apublic%3Aconversation%3Aeu-gb%3Aa%2F2e4f3545332478c8295a6a79fb...>. The interface has a dark header with "IBM watsonx Assistant Lite" and an "Upgrade" button. Below the header, the "career" workspace is selected, and the "Editor" tab is active. The workflow editor shows a sequence of steps: Step 1 is "Continue to next step"; Step 2 is "welcome" with a trigger "1 is Defined"; Step 3 is "choose the carrer choices here" with two buttons "How do I bal..." and "what steps c..." and a "+ 3" indicator; Step 4 is "This step has no content". A "New step +" button is at the bottom right of the editor. A "Preview" window is open on the right, showing a chat conversation. The chat history includes: "welcomeam mu", "choose the carrer choices here", and a list of suggestions: "Select an option", "How do I balance passion Vs salar...", "what steps can i take now to prepa...", "How do I know What kind of work ...", "How do I know What kind of work Environment suits my personality", "What type of companies are better...", and "Are additional courses important f...". The preview window also has a "Type something..." input field. The bottom of the screen shows a Windows taskbar with various icons, including the Start button, Search, and system tray icons for network, volume, and date/time (12:00 PM 8/3/2025).

# RESULTS

The screenshot displays the IBM Watson Assistant Lite interface in the Editor tab. The workflow is titled "career" and is being edited. The left sidebar shows a sequence of steps:

- Step 3: "What type of companies are better ?"
- Step 6: "which filed or Industry are you Intrested In?"
- Step 7: "Are additional course..." and "Do you want course suggestions that are recognized by top companies?"
- Step 8: "This step has no content"

The main editor area shows the configuration for the selected step (Step 8). It includes a "Set variable values" button, a "Preview" window, and a "Define customer response" button. The "Preview" window shows a chatbot conversation:

**choose the carrer choices here**

Are additional courses important ...

You 12:11 PM

Are additional courses important for standing out In my field

12:11 PM

**Do you want course suggestions that are recognized by top companies?**

There are no additional steps for this action. Add a new step or end the action.

Use the up arrow for prior messages

The bottom of the screen shows the Windows taskbar with the date and time: 12:11 PM 8/3/2025.

# RESULTS



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# CONCLUSION

- The **AI-based Career Counselor** for rural youth is a powerful initiative that bridges the gap between **opportunity and awareness**. By leveraging **IBM Cloud services** like Watson Assistant and Language Translator, the project offers **accessible, multilingual, and personalized career guidance** to students and job seekers in remote areas.

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# FUTURE SCOPE

- Voice-Based Interaction
- Mobile App Integration
- AI-Based Career Prediction
- . Integration with Government Portals
- Real-Time Counsellor Support

# IBM CERTIFICATIONS

In recognition of the commitment to achieve  
professional excellence



## Nuthpally Apoorva

Has successfully satisfied the requirements for:

### Getting Started with Artificial Intelligence



Issued on: Jul 16, 2025  
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Verify: <https://www.credly.com/badges/72158ce6-f99b-439c-9c80-088528547be5>





IBM **SkillsBuild**

Completion Certificate



This certificate is presented to  
**Nuthpally Apoorva**

for the completion of

**Lab: Retrieval Augmented Generation with  
LangChain**

(ALM-COURSE\_3824998)

According to the Adobe Learning Manager system of record

Git hub link : <https://github.com/nuthpallyapoorva>





**THANK YOU**