
CAPSTONE PROJECT

AGENTIC CAREER COUNSELING COMPANION

An AI-powered Career Development Agent

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OUTLINE

- **Problem Statement**
- **Technology Used**
- **Wow Factor**
- **End Users**
- **Result**
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- **GitHub Link**
- **Future Scope**
- **IBM Certifications**

! PROBLEM STATEMENT

In today's fast-paced, tech-driven world, students and job seekers are overwhelmed by the rapidly shifting career landscape. From emerging roles powered by AI and data science to industry-specific skill demands, it has become increasingly difficult to navigate career decisions with confidence. Traditional career counseling methods are manual, one-size-fits-all, and fail to scale — leaving millions without timely or personalized support. This creates a massive gap in career readiness, skill alignment, and job-market awareness.

Proposed Solution

Introducing the Agentic Career Counseling Companion — an intelligent, AI-powered career co-pilot built using IBM Watsonx.ai and Granite LLMs. This next-gen solution blends the power of natural language processing, real-time resume analytics, and context-aware recommendations to transform how users plan their careers.

Key Capabilities:

This AI agent redefines career mentoring with hyper-personalization, 24/7 availability, and scalable intelligence — empowering users not just to survive the job market, but to lead it.

TECHNOLOGY USED

IBM Watsonx.ai Studio

IBM Cloud Code Engine

FastAPI for backend

Streamlit for frontend UI

Granite-3-2B-Instruct LLM

Prompt App on Watsonx.ai

GitHub for version control

IBM CLOUD SERVICES USED

- IBM Watsonx AI Studio
- IBM Cloud Object Storage
- IBM Cloud Code Engine (for backend deployment)
- Watsonx Prompt App (for live demo)
- IBM Granite foundation models

Personalized AI Career Advisor for students and professionals

Real-time resume analysis and job matching

Suggests career paths, skill gaps, and learning content

Accessible via web (Streamlit UI + FastAPI backend)

Deployable Prompt App version for instant access

Can operate in bilingual (English + Telugu) formats

Voice input and real-time suggestion roadmap planned

END USERS

- College Students
- Job Seekers
- Career Coaches
- Educational Institutions
- Internship/Placement Cells

RESULTS

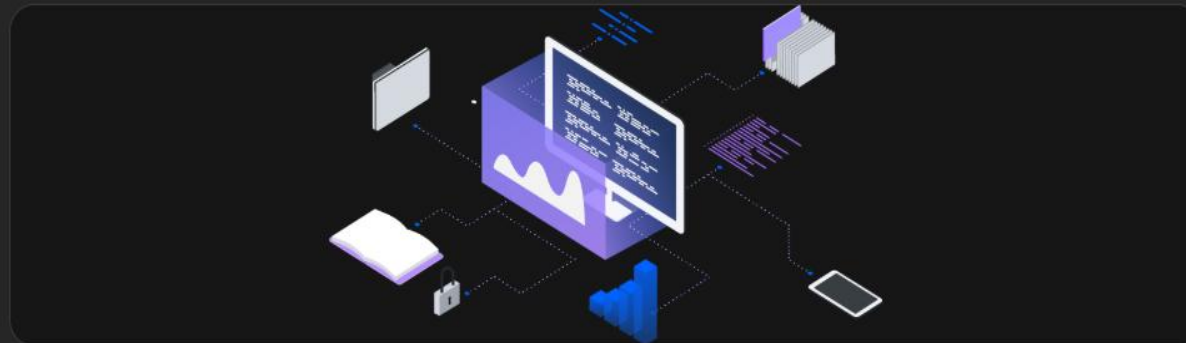
Build > Agent preview



Agentic Career Counseling AI 07:37 PM

Welcome to Agentic Career Counseling AI

Personalized career path suggestions using Granite model based on your skills and interests.

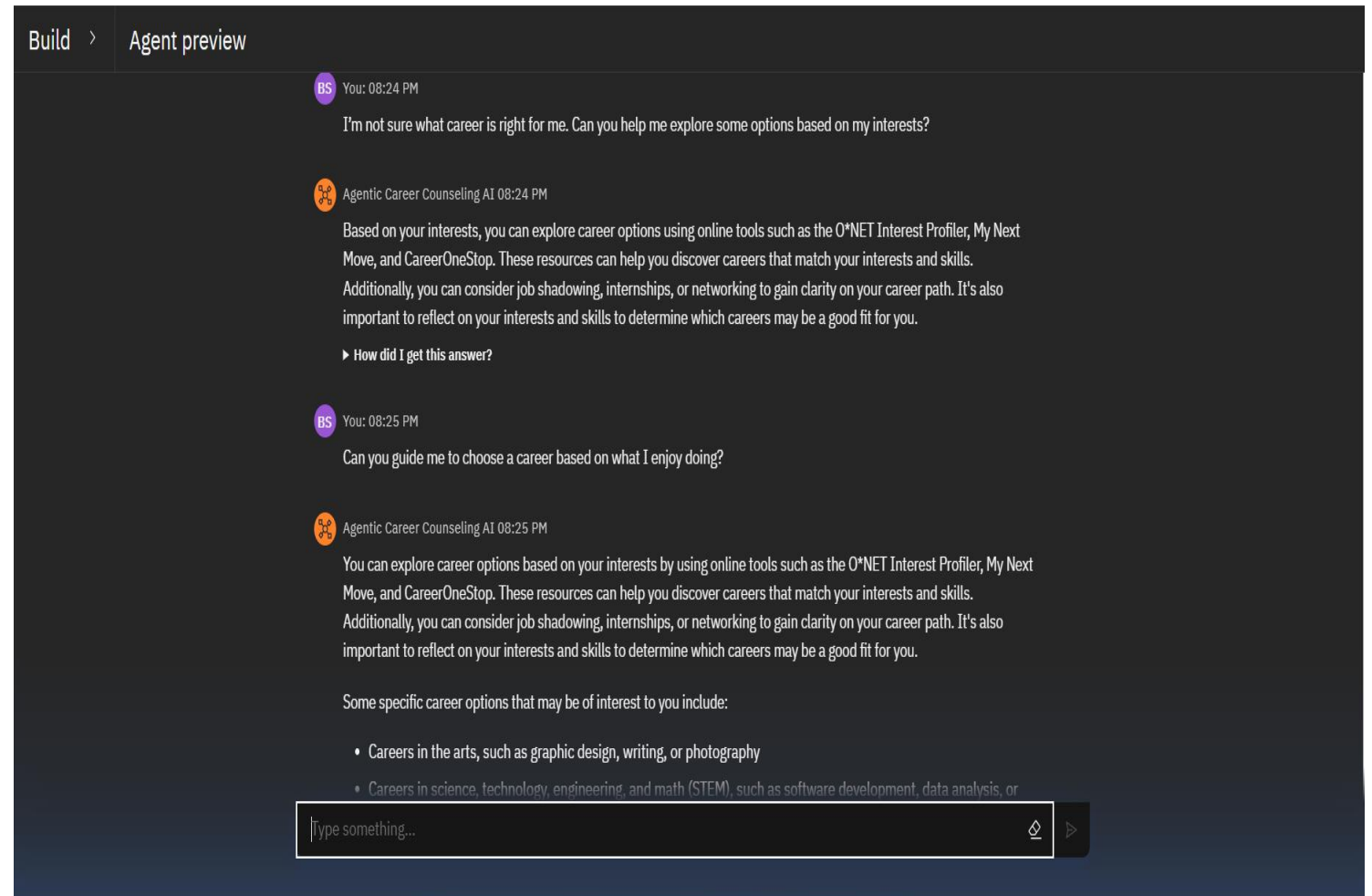


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RESULTS

- ❑ AI Agent successfully deployed as Prompt App
- ❑ Supports career Q&A, resume feedback, and guidance
- ❑ Integrated with IBM Granite models for contextual responses
- ❑ Accessible both via FastAPI + Streamlit UI and Prompt App



RESULTS

AI Agent Deployed as Prompt App
Fully integrated into IBM Watsonx Prompt Lab for intelligent career interactions.

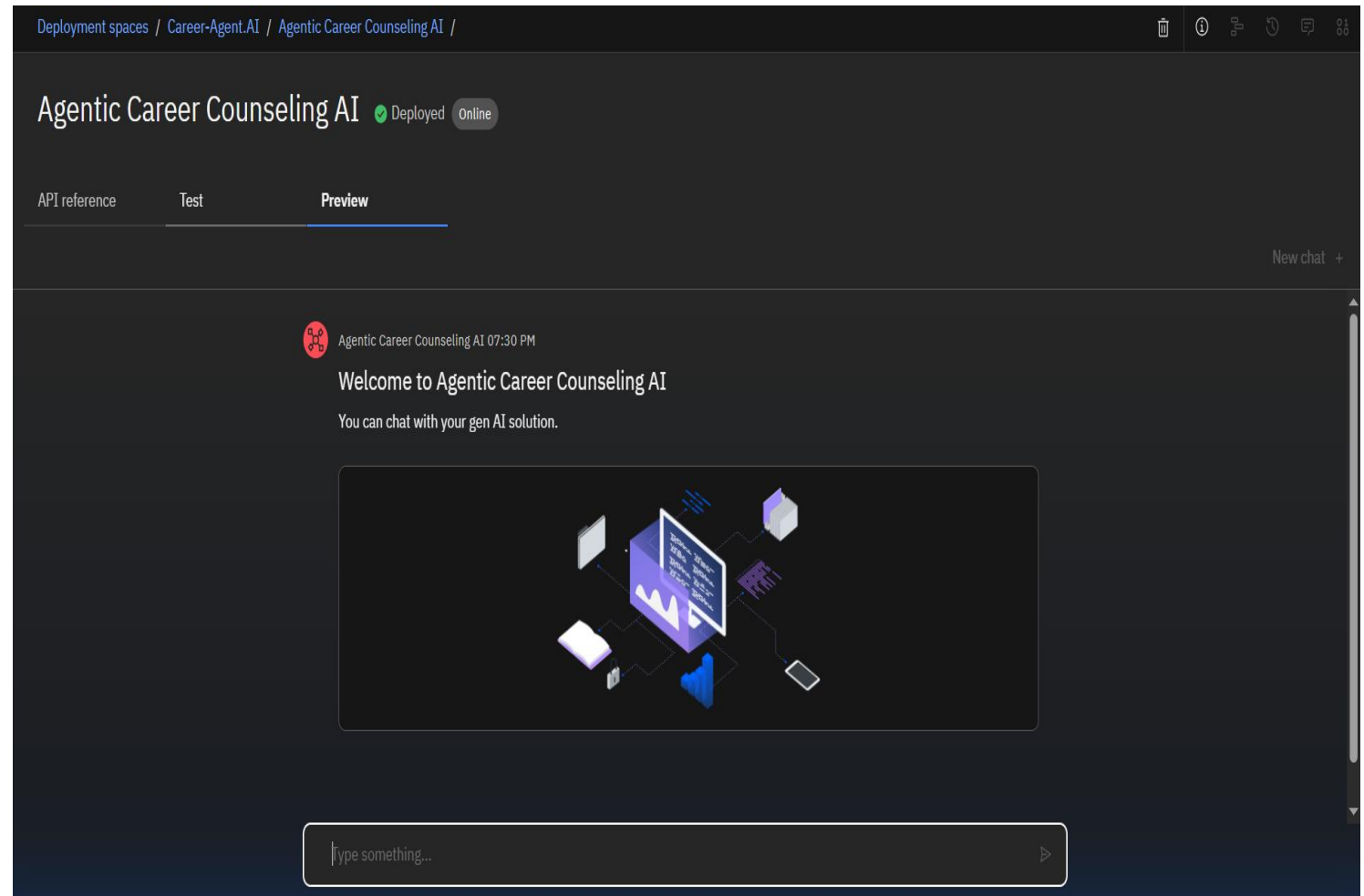
Supports Career Q&A, Resume Feedback & Guidance

Provides real-time personalized advice using user inputs.

Powered by IBM Granite LLMs
Ensures context-aware, accurate, and scalable responses.

Dual Access via FastAPI + Streamlit UI
Available as both a web app and Prompt App for flexible user access.

Deployed AI Agent

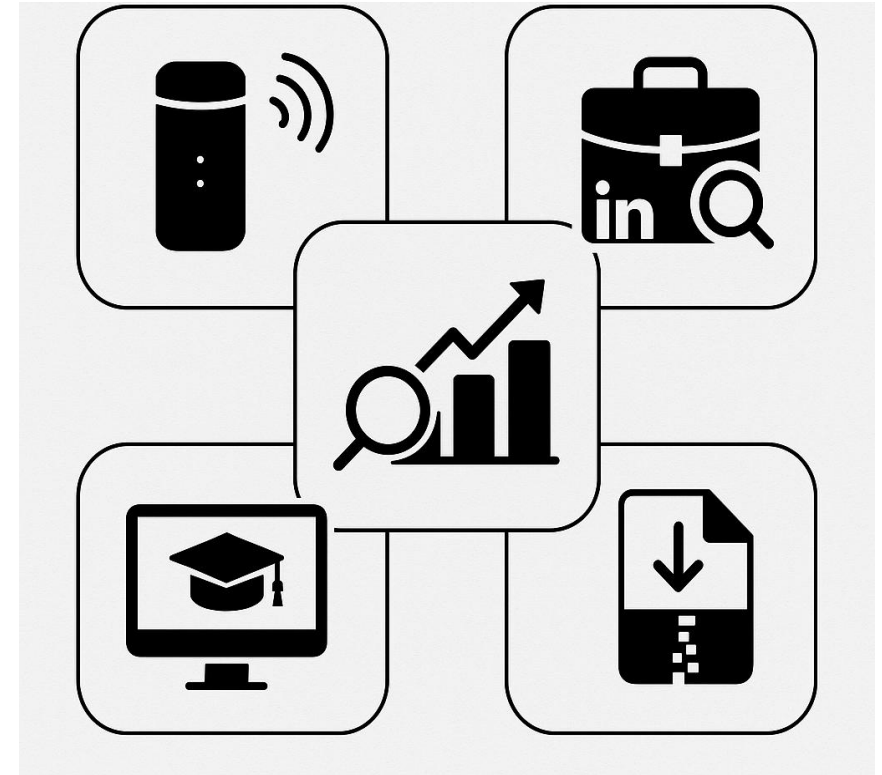


✓ CONCLUSION

- This AI-powered Career Agent revolutionizes decision-making by delivering personalized, real-time guidance—empowering users to explore the right career paths, identify skill gaps, and upskill with confidence.
- It reduces reliance on traditional counseling, closes the career guidance gap in education, and helps users make smarter, faster, and future-ready choices.

FUTURE SCOPE

- Voice-enabled AI career counseling
- LinkedIn & GitHub profile analysis
- Real-time job scraping and recommendation
- Integration with learning platforms (e.g., Coursera, IBM SkillsBuild)
- Predictive career path generation with skill mapping
- PDF/ZIP download of career reports



IBM CERTIFICATIONS

In recognition of the commitment to achieve
professional excellence



Boyina Sankar

Has successfully satisfied the requirements for:

Getting Started with Artificial Intelligence



Issued on: Jul 18, 2025
Issued by: IBM SkillsBuild

Verify: <https://www.credly.com/badges/b8f7f8f4-4bb8-4f4c-af05-b86d88dd6c57>



IBM **SkillsBuild**

Completion Certificate



This certificate is presented to

BOYINA SANKAR

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










REPO LINK:


[agentic-career-companion](#)

 **agentic-career-companion** PublicUnpinWatch 0

master 1 Branch 0 TagsAdd fileCode

 **sankar069** Added Dev Container Folder 2744137 · 1 hour ago 2 Commits

 <code>.devcontainer</code>	Added Dev Container Folder	1 hour ago
 <code>.env.example</code>	Initial commit of Career Counseling AI	1 hour ago
 <code>README.md</code>	Initial commit of Career Counseling AI	1 hour ago
 <code>app.py</code>	Initial commit of Career Counseling AI	1 hour ago
 <code>main.py</code>	Initial commit of Career Counseling AI	1 hour ago
 <code>requirements.txt</code>	Initial commit of Career Counseling AI	1 hour ago

 **README**

Agentic Career Counseling Companion

This is an AI-powered career guidance tool that provides personalized career suggestions using IBM's Granite large language model (LLM).

Features

- FastAPI backend for AI communication
- Streamlit frontend for user interface
- Realtime suggestions using IBM Watsonx.ai Granite Model

Run Locally

1. Clone the repo
2. Create `.env` with your IBM API Key
3. Run the backend:

```
uvicorn main:app --reload
```
4. Run the frontend:

```
streamlit run app.py
```

Dependencies

See `requirements.txt`



THANK YOU