
CAPSTONE PROJECT

Faculty Digital Profile Builder

Presented By:
Apsara V A
Yenepoya Deemed to be University, Bangalore
BCA (Artificial Intelligence & Data Science)

OUTLINE

- Problem Statement
- Technology used
- Wow factor
- End users
- Result
- Conclusion
- Git-hub Link
- Future scope
- IBM Certifications

Problem Statement

Faculty members often struggle to maintain accurate academic profiles required for accreditation, research visibility, and career progression. Manually compiling data from various sources like CVs, certificates, and spreadsheets is tedious, error-prone, and lacks standardization.

Proposed Solution:

An AI-powered system using Retrieval-Augmented Generation (RAG) and IBM Granite automates the creation of structured faculty profiles. By extracting and organizing academic data from uploaded documents, the solution reduces manual effort, ensures consistency, and supports institutional needs.

Technology used

IBM Cloud Lite Services

IBM Granite Foundation Model

NLP (Natural Language Processing)

Retrieval-Augmented Generation (RAG)

IBM cloud services used

- IBM Watsonx.ai Studio
- IBM Granite Model
- IBM Cloud Agent Lab
- IBM Cloud Functions / Cloud Foundry (for hosting)

Wow factors

This agent significantly reduces the time and effort required to create and update faculty academic profiles. By leveraging Retrieval-Augmented Generation (RAG) and IBM Granite, it automates the extraction and generation of structured academic data, ensuring accuracy, consistency, and standardization across departments. The system enhances institutional readiness for accreditation and streamlines faculty documentation tasks with minimal manual input.

Unique features:

Semantic search and retrieval across uploaded CVs, certificates, and documents

Auto-generation of structured faculty profiles including qualifications, publications, FDPs, patents, and achievements

Dynamic profile updates when new documents are added

Profile formatting aligned with NAAC/NBA accreditation standards

Natural language interface for querying academic information


Integration-ready: outputs can be embedded into faculty portals or ERP systems

End users

- Faculty Members
- Academic Institutions and Universities
- Accreditation Committees (NAAC, NBA)
- College Administrative Teams
- Educational ERP / Website Developers

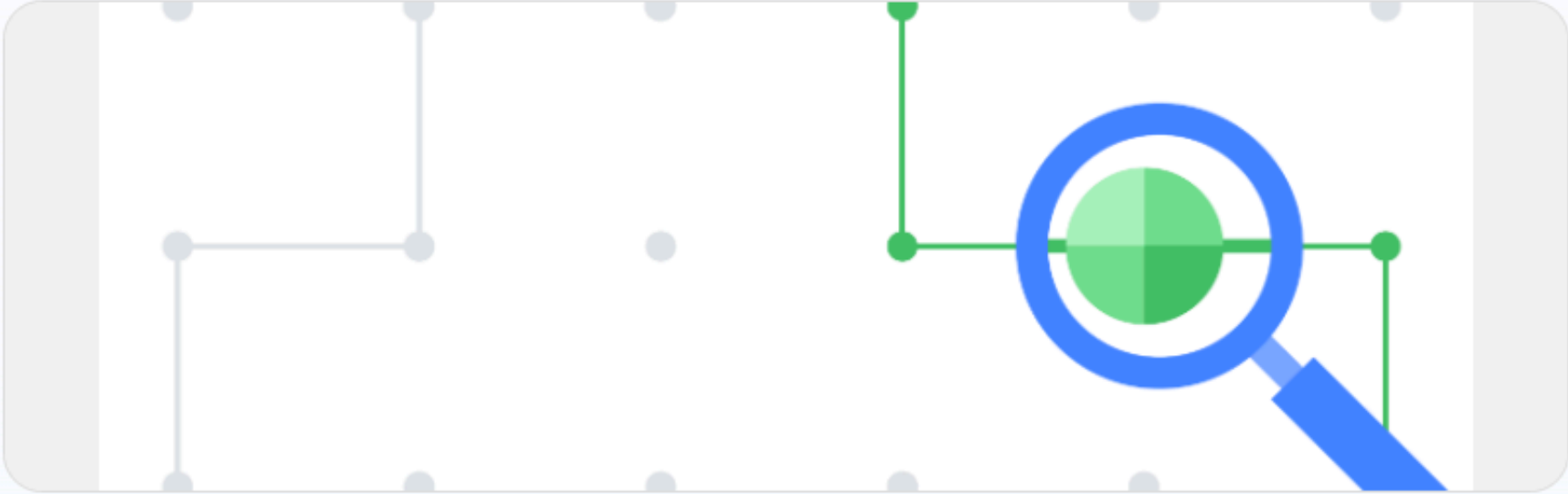
Results



Agent preview

 Faculty profile builder 09:42 AM

Welcome to Faculty profile builder

Please attach the CV for the faculty profile builder



Results

Agent preview



You: 09:54 AM

Hi



watsonx Agent 09:54 AM

Hi, I am faculty digital profile builder. How can I help you?

► How did I get this answer?



You: 09:55 AM

List academic qualifications



watsonx Agent 09:55 AM

Here are the academic qualifications:

- Bachelor of Education, Tamil Nadu Teacher Education University
- TEFL : Teaching English as a Foreign Language 120 hr - 2022, TEFL Professional Institute - Teacher Record 2022
- Master Of Arts : English Language and Literature, University of Kerala
- Bachelor of Arts : English and Communicative English, University of Kerala

► How did I get this answer?

Type something...



Results

Agent preview



You: 09:57 AM

Summarize FDPs, patents and achievements



watsonx Agent 09:57 AM

Summary of FDPs, Patents, and Achievements

FDPs (Faculty Development Programs):

- **TEFL (Teaching English as a Foreign Language):** Completed a 120-hour course in 2022 from TEFL Professional Institute.
- **Swayam MHRD:** Completed a course in Basic Instructional Methods in March 2023.
- **Elementary English as a Second Language:** Completed in January 2022.

Patents:

- No patents listed in the provided information.

Achievements:

- **Educational Qualifications:**
 - Bachelor of Education from Tamil Nadu Teacher Education University.
 - Master of Arts in English Language and Literature from the University of Kerala.
 - Bachelor of Arts in English and Communicative English from the University of Kerala.

Type something...



Conclusion

- Automated faculty profile creation using Agentic AI and RAG
- Built using IBM Watsonx and Granite for intelligent content generation
- Reduces manual work and ensures data consistency
- Produces accreditation-ready profiles (NAAC/NBA formats)
- Scalable solution suitable for institutions of any size

Future scope

- Integration with Research Databases
- Real-Time Profile Updates
- Accreditation Format Templates
- Faculty Dashboard and Analytics
- Multilingual Support

IBM CERTIFICATIONS

In recognition of the commitment to achieve
professional excellence



Apsara V A

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/7702257a-b12f-422e-b4c1-d7dd2a3e8a23>



IBM CERTIFICATIONS

In recognition of the commitment to achieve
professional excellence



Apsara V A

Has successfully satisfied the requirements for:

Journey to Cloud: Envisioning Your Solution



Issued on: Jul 18, 2025

Issued by: IBM SkillsBuild

Verify: <https://www.credly.com/badges/97da545e-8c15-40cd-a00a-c477c1797eaa>



7/24/25, 6:29 PM

Completion Certificate | SkillsBuild

IBM SkillsBuild

Completion Certificate



This certificate is presented to

APSARA V A

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

GitHub Link

Github link : <https://github.com/apsaravanil/faculty-profile-agent-ai>

THANK YOU