

FACULTY DIGITAL PROFILE BUILDER USING AGENTIC AI

Presented By:

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OUTLINE

- **Problem Statement**
- **Proposed System/Solution**
- **System Development Approach (Technology Used)**
- **Algorithm & Deployment**
- **Result (Output Image)**
- **Conclusion**
- **Future Scope**
- **References**

PROBLEM STATEMENT

- Faculty in higher education institutions often struggle with the manual and repetitive process of creating and maintaining their academic profiles for purposes such as NAAC/NBA accreditation, research funding, and promotions. The data required is scattered across CVs, publications, certificates, and spreadsheets, leading to inconsistency, errors, and time-consuming updates.

PROPOSED SOLUTION

- The proposed system is an Agentic AI-based Faculty Digital Profile Builder that automates the creation and management of comprehensive academic profiles.
- **Key features:**
 - - Extraction of structured and unstructured data from documents
 - - RAG + IBM Granite for intelligent profile generation
 - - Dynamic formatting for NAAC/NBA compliance
 - - Natural language query interface (e.g., “Show Dr. Meena’s publications from 2021”)

SYSTEM APPROACH

- **System Requirements:**
 - - Input: Faculty documents (PDF, DOCX, XLSX, etc.)
 - - Output: Formatted digital profile (DOC/PDF/HTML)
- **Libraries/Tools:**
 - - Python, PyMuPDF, Pandas, python-docx
 - - IBM Granite, IBM Cloud Lite
 - - LangChain (RAG), Streamlit

ALGORITHM & DEPLOYMENT

- **Algorithm:**
 - - Text Extraction via OCR/PDF parsers
 - - NER for academic entities
 - - RAG to retrieve profile templates
 - - LLM to generate formatted output
- **Deployment:**
 - - Hosted on IBM Cloud Lite
 - - Front-end: Streamlit (optional)
 - - API Workflow: Upload → Extract → Generate → Export

RESULT

The screenshot shows a web browser window with the URL `dataplatfom.cloud.ibm.com/ml-runtime/spaces/e08303ea-328d-4cba-bb29-d50ff500bf52/deployments?context=wx`. The page title is "Mounika's Agent". The navigation tabs are "Overview", "Assets", "Deployments" (selected), "Jobs", and "Manage". The "Deployments" tab shows a table with one deployment:

Name	Type	Status	Asset	Asset type	Tags	Last modified
Watsonx Agent	Online	Deployed	watsonx Agent	AI service	wx-agent	30 seconds ago Mounika Chelamsetti (You)

At the bottom, there is a pagination bar showing "Items per page: 20", "1-1 of 1 items", and "1 of 1 pages".

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dataplatform.cloud.ibm.com/wx/agents/c78f17eb-a7d7-48c1-8ab7-dc73905c5438?project_id=a9fac53f-6ab5-4374-b3f3-9350a7f9cc29&context=wx

IBM watsonx Upgrade ? Mounika Chelamsetti's Acc... Dallas MC

Projects / Faculty Digital Profile / watsonx Agent Share feedback Autosaved 9:48 PM New agent + Deploy

Build AI Model: llama-3-3-70b-instruct

Setup

Configuration

Framework LangGraph Architecture ReAct

Instructions You are an intelligent assistant designed to help automate the generation and management of academic faculty profiles. You can extract relevant academic details from input documents such as CVs, certificates, and Excel files, and present them in a structured, formatted profile suitable for accreditation (NAAC/NBA) and institutional records. Advanced configuration

Knowledge vector index Select or create vector index Clear chat

Tools

Agent preview

MC You: 09:45 PM

Hi

watsonx Agent 09:45 PM

Hi, I'm your Faculty Profile AI assistant. I can help you generate, update, or query academic profiles. How can I assist you today?

How did I get this answer?

1: Generating final answer

Steps created by Agent

MC You: 09:45 PM

How many research papers did the faculty publish in 2022?

watsonx Agent 09:45 PM

To get the number of research papers published by the faculty in 2022, I would need to search for this specific information. Here is the JSON for a function call that could help answer this question:

```
{ "type": "function", "name": "GoogleSearch", "parameters": { "q": "faculty research papers published in 2022" } }
```

Type something...

CONCLUSION

- The Faculty Digital Profile Builder provides an innovative, scalable solution for automating academic profile creation. It reduces manual effort, ensures consistency, and showcases the real-world application of Agentic AI and IBM Granite models in the education sector.

FUTURE SCOPE

- - Integrate with institutional ERP for live updates
- - Auto-upload profiles to academic portals
- - Multilingual support
- - Student profile generation extension
- - Google Scholar/Scopus integration for real-time publication data

REFERENCES

- - IBM Granite Documentation
- - LangChain RAG Framework
- - NAAC/NBA Faculty Profile Guidelines
- - NLP Libraries: spaCy, PyMuPDF, python-docx
- - IBM Cloud Lite Tools

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Completion Certificate



This certificate is presented to
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(ALM-COURSE_3824998)

According to the Adobe Learning Manager system of record

Completion date: 24 Jul 2025 (GMT)

Learning hours: 20 mins



THANK YOU