FACULTY DIGITAL PROFILE BUILDER USING AGENTIC AI

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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 Al-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



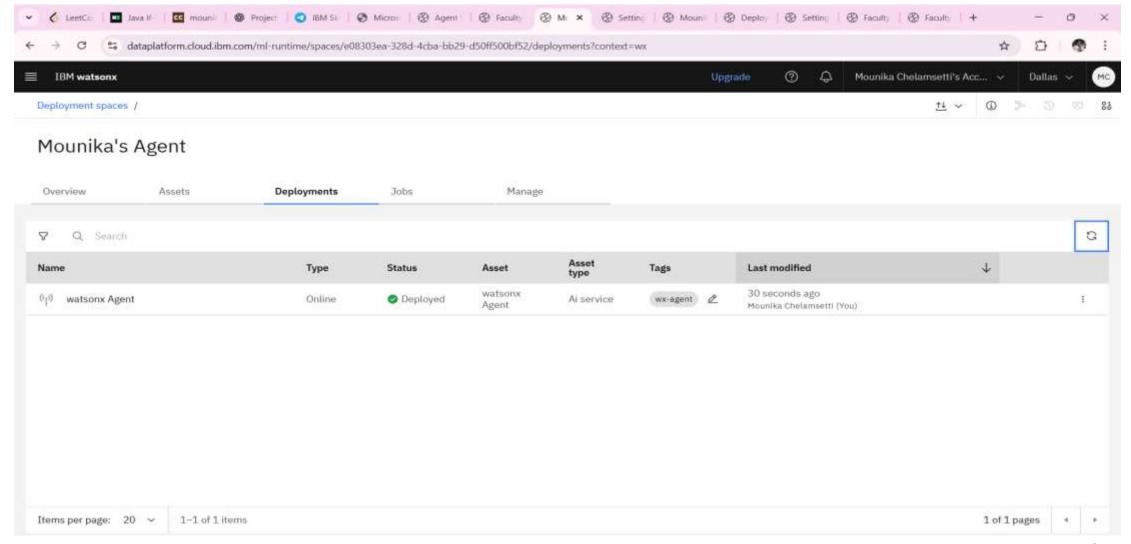
ALGORITHM & DEPLOYMENT

- Algorithm:
- Text Extraction via OCR/PDF parsers
- NER for academic entities
- RAG to retrieve profile templates
- LLM to generate formatted output

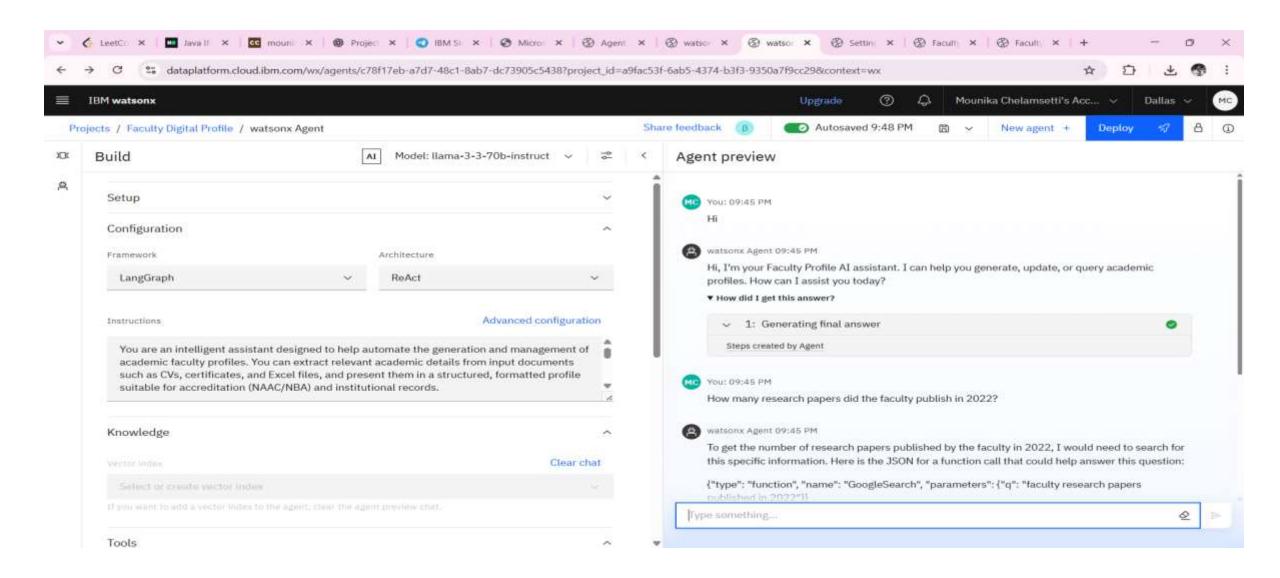
- Deployment:
- Hosted on IBM Cloud Lite
- Front-end: Streamlit (optional)
- API Workflow: Upload → Extract → Generate → Export



RESULT









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 realworld 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 date: 24 Jul 2025 (GMT)

Learning hours: 20 mins



THANK YOU

