IBM AICTE PROJECT

AI AGENT FOR DIGITAL FINANCIAL LITERACY

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OUTLINE

- Problem Statement
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- End users
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- IBM Certifications



PROBLEM STATEMENT

• Many individuals, especially from rural or less digitally aware communities, face challenges in understanding digital financial tools such as UPI, online banking, loan procedures, or scam prevention. Lack of awareness leads to financial mismanagement, fraud risks, and exclusion from government schemes.

Proposed Solution:

• An Al-powered Financial Literacy Agent using Natural Language Processing (NLP) and Retrieval-Augmented Generation (RAG) to educate users on essential financial topics. The assistant provides clear guidance on digital transactions, budgeting, loans, and scam prevention — all with multilingual support and reliable responses sourced from government portals and financial institutions.



TECHNOLOGY USED

- IBM cloud lite services
- IBM Watsonx.ai Studio
- IBM Granite Foundation Model (LLM)
- Natural Language Processing (NLP)
- Vector Index (Watsonx.ai)
- Retrieval Augmented Generation (RAG)



IBM CLOUD SERVICES USED

- IBM Cloud Watsonx Al Studio
- IBM Cloud Watsonx AI runtime
- IBM Cloud Agent Lab
- IBM Granite foundation model
- IBM Cloud Object Storage
- IBM Cloud IAM (Identity and Access Management)



WOW FACTORS

- This AI agent aims to empower users with accurate, accessible, and personalized financial knowledge.
- It will reduce misinformation, help users make better money decisions, and increase trust in digital financial systems.
- The solution is especially impactful for underserved communities and first-time digital users.

Unique features:

- Retrieval-based answers from trusted sources like RBI and NPCI
- Natural Language Processing (NLP) for understanding diverse user queries
- Document-based responses using a Vector Index (RAG implementation)
- Safe handling of off-topic or unrelated questions
- Designed for multilingual interaction to reach regional users
- Covers essential topics like UPI, online scams, loans, budgeting, and savings

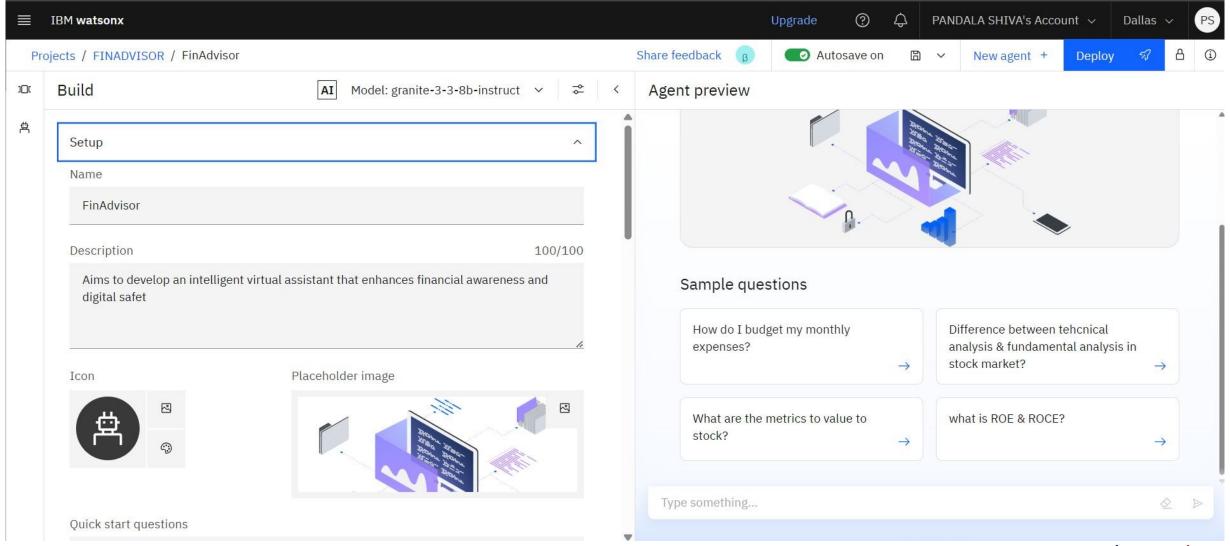


END USERS

- General Public
- First-time Digital Users
- Elderly Citizens
- Students and Young Adults
- NGOs and Government Outreach Programs
- Self-Help Groups / Women's Collectives
- Educators / Institutions
- Microfinance Beneficiaries

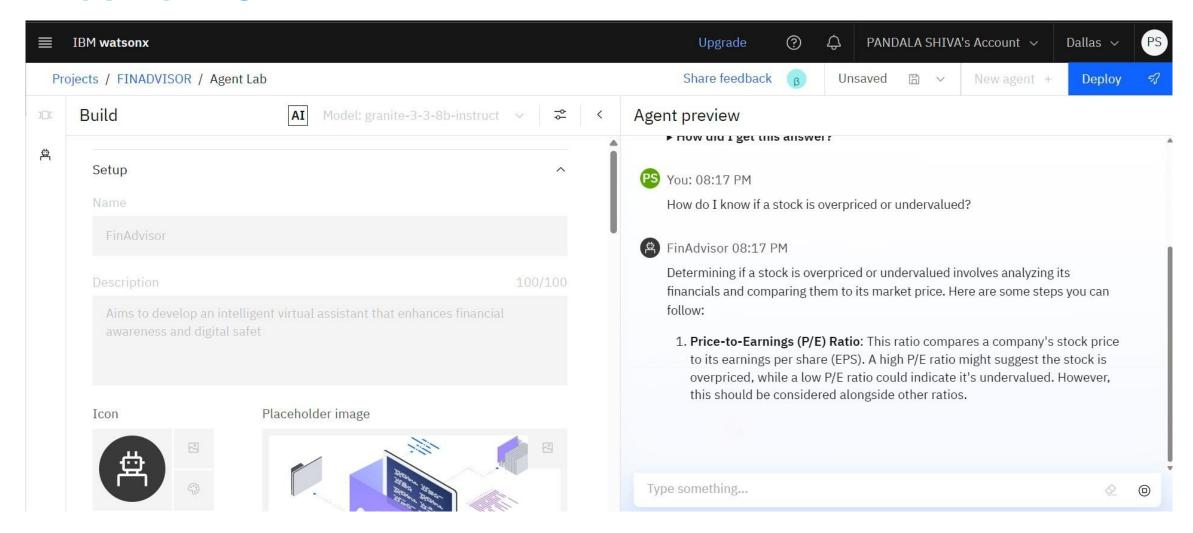


RESULTS: SETTING UP



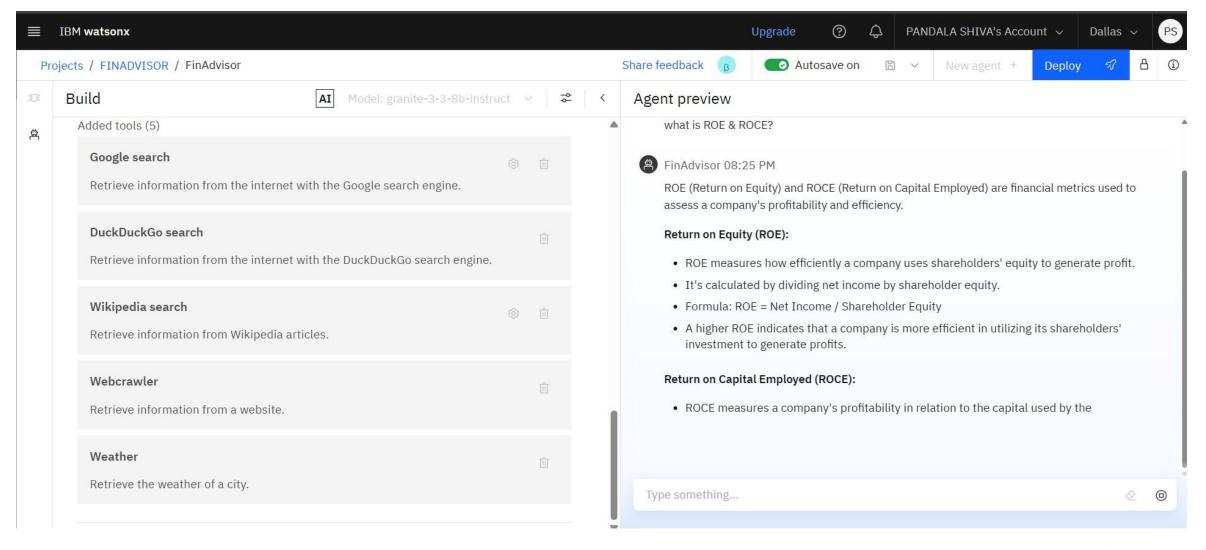


RESULTS: AGENT PREVIEW





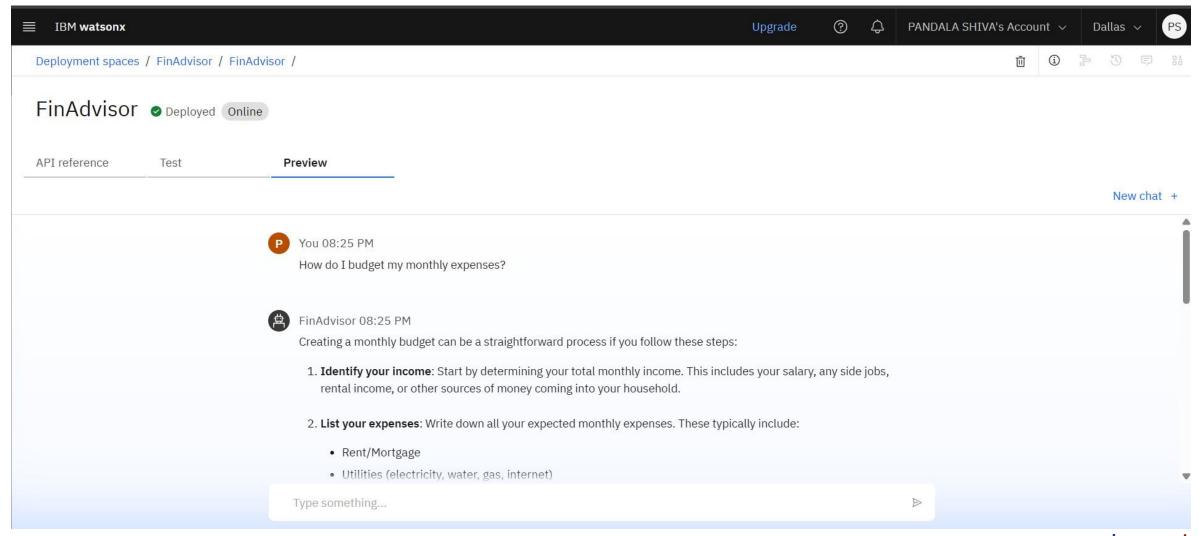
RESULTS: TOOLS USED (ALSO USED VECTOR DATABASE INDEX)





RESULTS

Deployed AI Agent





CONCLUSION

- The Digital Financial Literacy Al Agent leverages the power of IBM Watsonx.ai and Retrieval-Augmented Generation (RAG) to deliver accessible, accurate, and contextaware financial guidance.
- By addressing real-world concerns like UPI safety, loan awareness, and scam prevention, the assistant empowers users to make informed financial decisions.
- With multilingual support and document-backed answers, it ensures inclusivity, trust, and reliability.
- This solution has the potential to bridge the digital divide and promote financial well-being across diverse communities.



GITHUB LINK

Github:

- https://github.com/ShivaNetha1/Digital-Financial-Literacy-Al-agent
- Building Testing Deployment videos on my personal Youtube channel:
 https://www.youtube.com/watch?v=oanWInqpiP4
- https://www.youtube.com/watch?v=SfwFLWpIVdk&t=13s



FUTURE SCOPE

- Multilingual Research Support
- Voice-Activated Research Assistant
- Real-Time Collaboration Features
- Research Gap and Novel Topic Identification
- Integration with Publishing Platforms
- Al-Assisted Paper Drafting



IBM CERTIFICATIONS

In recognition of the commitment to achieve professional excellence



PANDALA SHIVA

Screens

Has successfully satisfied the requirements for:

Getting Started with Artificial Intelligence



Issued on: Jul 16, 2025 Issued by: IBM SkillsBuild

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Completion Certificate



This certificate is presented to

PANDALA SHIVA

Attach you

for the completion of

Lab: Retrieval Augmented Generation with LangChain

(ALM-COURSE_3824998)

According to the Adobe Learning Manager system of record

Completion date: 17 Jul 2025 (GMT)

Learning hours: 20 mins



THANK YOU

