IBM Skillbuild Project

AI AGENT FOR DIGITAL FINANCIAL LITERACY

Presented By:

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OUTLINE

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PROBLEM STATEMENT

Many users in India struggle with understanding digital finance tools like UPI, net banking, online lending, and budgeting. Due to limited awareness, they are prone to online scams, financial fraud, and bad loan decisions. There's a need for a multilingual, intelligent assistant that guides users in a personalized and culturally inclusive way to promote financial literacy and digital safety.



Problem Statement No.7 – Al Agent for Digital Financial Literacy

The Challenge – An AI Agent for Digital Financial Literacy, powered by RAG (Retrieval-Augmented Generation), helps users understand and navigate essential financial tools and practices. It retrieves reliable content on using UPI, avoiding online scams, understanding interest rates, budgeting, and personal finance management from government portals, banking websites, and educational platforms.

With multilingual support, users from diverse backgrounds can interact in their preferred language and ask questions like "How do I send money via UPI?" or "What is a safe interest rate for a loan?" The agent ensures financial literacy is accessible, personalized, and culturally inclusive.

This AI-driven assistant empowers users with knowledge, protects them from fraud, and builds confidence in digital finance.

Technology – Use of IBM Cloud Lite services / IBM Granite is mandatory.



PROPOSED SOLUTION

We propose an Al-driven chatbot using IBM Watsonx.ai (Granite/Mistral models) that:

- Answers user queries about UPI, EMI, budgeting, loans, scams.
- Works in English, Hindi, and other regional languages.
- Uses Retrieval-Augmented Generation (RAG) to pull from reliable documents (NPCI, RBI, etc.)
- Offers simple, step-by-step financial guidance.
- Can be accessed via Watsonx Al Agent interface on IBM Cloud Lite.



SYSTEM APPROACH

- Platform: IBM Cloud Lite (Watsonx.ai Agentic Lab)
- Tools Enabled:
 - Search Tool
 - Code Interpreter (EMI calculations)
 - File Tool (RAG documents)
 - Translation Tool (multilingual)
 - Memory Tool (context awareness)
- Data Sources:
 - NPCI (UPI info), RBI (Fraud prevention)
 - Simulated PDFs/JSONs from reliable financial websites
- Languages Supported: English, Hindi



ALGORITHM & DEPLOYMENT

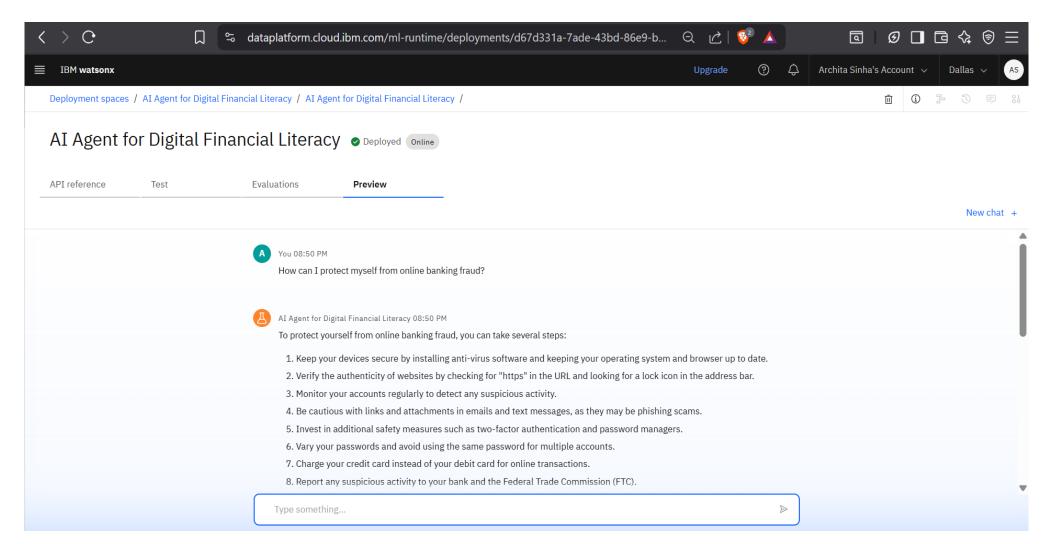
- Algorithm Strategy:
 - 1. RAG Architecture:
 - Searches uploaded docs (PDF/JSON) based on user query
 - Retrieves top documents and uses model to generate answer
 - 2. Model:
 - IBM Granite / Mistral-large for language generation
 - 3. Tools:
 - Code Tool for interest, EMI, savings calculations
 - Translator for Hindi queries
 - Memory to maintain conversation flow
- Deployment Path:

Watsonx.ai Sandbox → Associate Runtime → Create Agent → Deploy in IBM Cloud

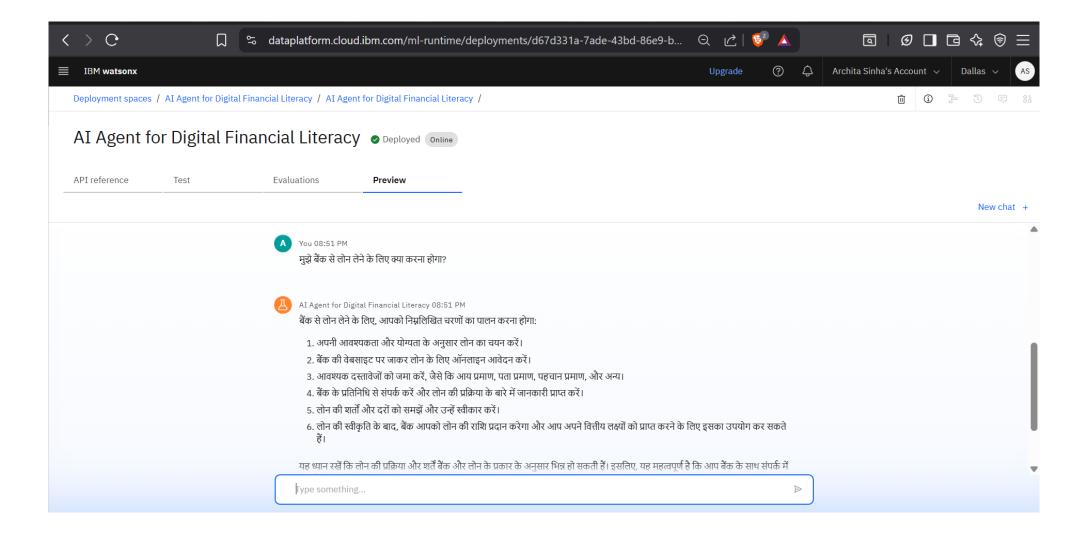


RESULT

The agent responds accurately to user queries in both English and Hindi, offering step-by-step advice using reliable financial knowledge.









CONCLUSION

- The Al Agent successfully answers questions about digital finance.
- Provides multilingual support and practical guidance on scams, loans, and UPI usage.
- Promotes digital financial literacy for diverse users.

Challenges:

Training the model for regional context

Simulating trusted knowledge sources for RAG

Resolved via Watsonx tools and well-designed prompt + document set.



FUTURE SCOPE

- Integrate voice-based interaction for accessibility
- Expand language support (e.g., Tamil, Bengali)
- Connect with APIs for real-time interest rates or financial offers
- Deploy to mobile app / WhatsApp bot
- Add visuals, charts, or EMI calculators via embedded components



REFERENCES

- 1. https://www.npci.org.in/
- 2. https://www.rbi.org.in/
- 3. https://www.digitalindia.gov.in/
- 4. https://www.ibm.com/cloud/watsonx
- 5. SEBI Investor Awareness Portal
- 6. Groww and Finshots (for simulated examples)



IBM CERTIFICATIONS

Certificate(getting started with AI)

In recognition of the commitment to achieve professional excellence



Archita Sinha

Has successfully satisfied the requirements for:

Getting Started with Artificial Intelligence



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Certificate(RAG Lab)

7/20/25, 1:57 PM Completion Certificate | SkillsBuild

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Completion Certificate



This certificate is presented to

Archita Sinha

for the completion of

Lab: Retrieval Augmented Generation with LangChain

(ALM-COURSE_3824998)

According to the Adobe Learning Manager system of record

Completion date: 18 Jul 2025 (GMT)

Learning hours: 20 mins



THANK YOU

