
IBM HACKATHON PROJECT

DIGITAL FINANCE AGENT

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PROBLEM STATEMENT

AI 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 USED

IBM cloud lite services

Natural Language Processing (NLP)

Retrieval Augmented Generation (RAG)

IBM Granite model

IBM CLOUD SERVICES USED

- IBM Cloud Watsonx AI Studio
- IBM Cloud Watsonx AI runtime
- IBM Cloud Agent Lab
- IBM Granite foundation model

WOW FACTORS

Hyperlocal Financial Coaching

- Understands regional contexts—from rural loan schemes to urban fintech tools.
- Answers in **vernacular languages** like Hindi, Marathi, Tamil, Bengali—with tone and clarity intact.

AI + RAG-Driven Smart Guidance

- Uses **IBM Granite + RAG** to fetch real-time, trusted data from RBI, SEBI, NPCI portals.
- Doesn't guess—it **retrieves then reasons**, giving users **accurate, context-aware answers**.

Built-In Scam Shield

- Educates users about fake OTPs, phishing, and payment fraud.
- Equips them with **digital safety checklists** and **secure behavior prompts**.

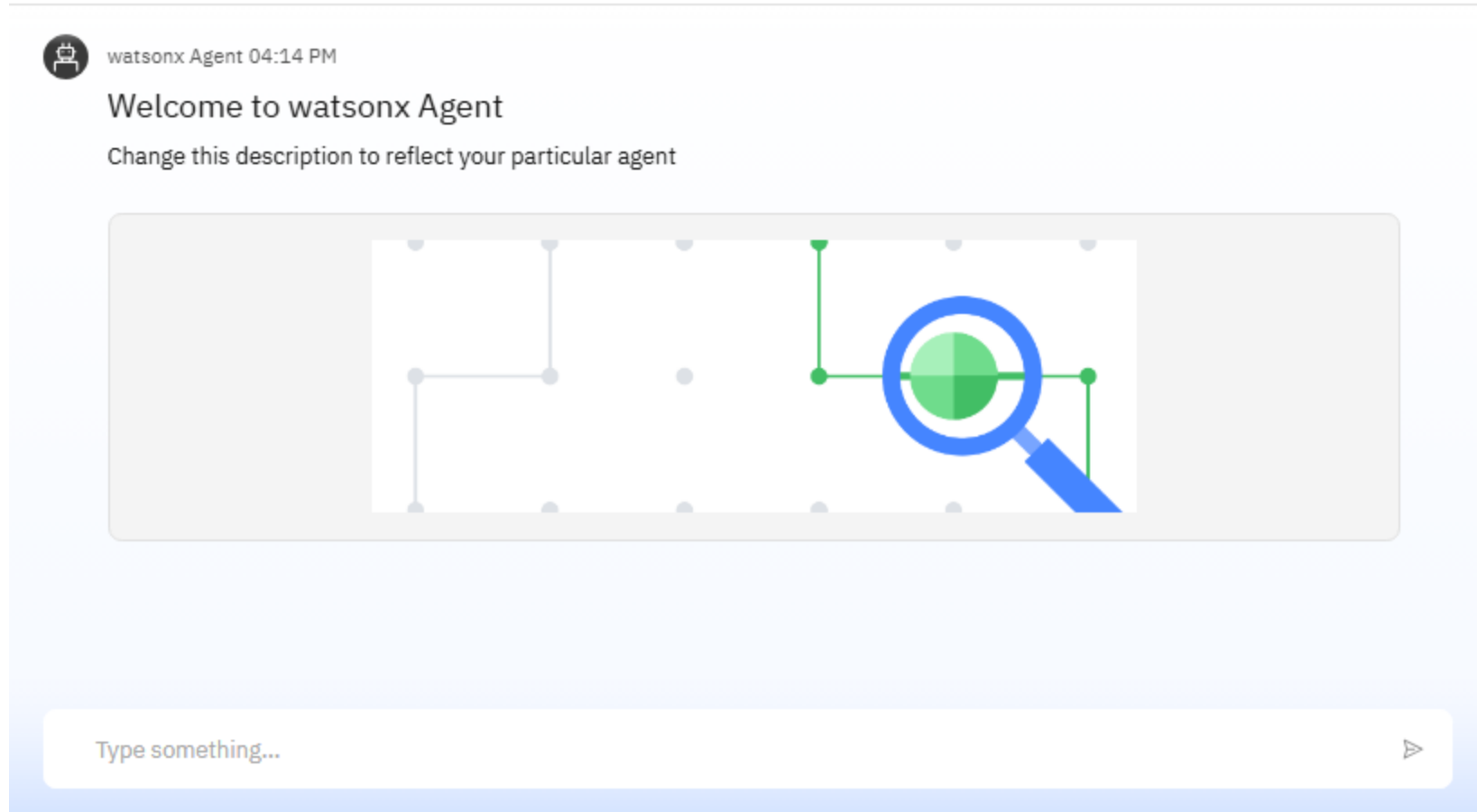
Intuitive Conversational Design

- Feels like talking to a friendly expert—uses analogies, relatable examples, and adaptive tone.
- Handles queries like: *"UPI se paise kaise bheje?"* with detailed, step-by-step walkthroughs.

END USERS

- Academic Researchers
- Research Institutions and Universities
- Industry R&D Teams
- Educators
- Students
- Rural peoples
- Financial Illetrate Peoples

RESULTS



RESULTS



You 04:15 PM

How to make payment from UPI?



watsonx Agent 04:15 PM

To make a payment from UPI, you can follow these steps:

1. Open your UPI app and log in to your account.
2. Click on "UPI Payments" or "Make Payment" option.
3. Enter the recipient's UPI ID or Virtual Payment Address (VPA).
4. Enter the amount you want to pay.
5. Confirm the payment details and enter your UPI PIN.
6. The payment will be processed and you will receive a confirmation message.

You can also use UPI to pay credit card bills, make payments on e-commerce websites, and pay for services like mobile recharges and bill payments. Additionally, some apps like Google Pay, PhonePe, and Paytm offer UPI Lite, which allows you to make payments of up to ₹1000 without the use of a UPI PIN.

Type something...



RESULTS



You 04:17 PM

To do trading I don't have any prior experience so can you teach me some trading concept through which I can earn profit?



watsonx Agent 04:17 PM

Here are some trading concepts for beginners:

1. Trading is speculating on an underlying asset's market price movement without owning it.
2. Learn about markets online or by reading books and practice a lot.
3. Try different strategies and record every trade you have made.
4. Create a trading plan, find trade ideas, and explore strategies to take your trading to the next level.
5. Develop a trading plan, be flexible, use risk management tools, stay up-to-date on market news, and educate yourself.
6. Discover trading basics for beginners, including key concepts, types of trading, financial instruments, and essential strategies.
7. Learn forex basics, including key forex terminology, market mechanics, and the different types of forex trading.
8. Understand the basics of futures trading, including typical users of the futures markets, regulation of futures professionals, and before you purchase commodity futures or options.

These are just a few examples of trading concepts for beginners. It's important to remember that trading involves risks, and it's essential to educate yourself and develop a trading plan before starting to trade. Additionally, it's crucial to choose a reliable broker and to start with a small amount of money to minimize potential losses.

Type something...



RESULTS

Deployed AI Agent

watsonx Agent ✓ Deployed Online

API reference


Test


Preview

[New chat](#) +

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 You 04:18 PM
What is e-Rupee?

 watsonx Agent 04:18 PM
The e-Rupee is a digital version of the Indian rupee, issued by the Reserve Bank of India (RBI) as a central bank digital currency (CBDC). It is a tokenized digital version of the Indian rupee, which can be used for transactions, and is stored in a digital wallet. The e-Rupee is designed to provide a secure, fast, and efficient way of making transactions, and can be used to receive and send money, as well as make payments for transactions. It is available through various banks and financial institutions, including ICICI Bank, SBI, and HDFC Bank, and can be accessed through mobile apps and online platforms.

► [How did I get this answer?](#)



Type something...



CONCLUSION

This agent stands as a **bridge between complexity and clarity**, especially for users who are often overlooked by mainstream financial tech. With multilingual support, scam awareness, and RAG-powered precision, it doesn't just serve information—it *protects, educates, and empowers*. Its conversational flair and contextual intelligence make financial literacy feel human, accessible, and actionable.

GITHUB LINK

[Vaishnav112006](#)

FUTURE SCOPE

- **Predictive Financial Coaching** Use user behavior and historical data to offer tailored nudges—like reminders before bill due dates or warnings about risky spending patterns.
- **Integration with Financial Platforms** Connect with UPI apps, micro-lenders, or mutual fund portals via APIs, enabling real-time assistance during transactions.
- **Multimodal Interface Expansion** Add voice assistant support (IVR), WhatsApp chatbots, or interactive dashboards for better accessibility across literacy levels.
- **Credentialed Microlearning System** Offer bite-sized, gamified courses on insurance, budgeting, and fintech—complete with progress tracking and certification badges.
- **Community-Led Insights** Include feedback loops where users contribute local financial hacks, report scams, or suggest policy improvements.

FUTURE SCOPE

- **Regulatory Update Engine** Auto-monitor changes from RBI, SEBI, PMJDY, etc., and push updates in digestible formats to users.
- **Agent Translation as a Service** License the multilingual scaffold to other nonprofits and social enterprises, letting them plug-and-play the agent in their own financial literacy contexts.
- **Enterprise Mode for MSMEs** Customize guidance for small businesses—on GST filing, digital payments, credit scoring—boosting formal financial inclusion.
- **Plug into Educational Curricula** Collaborate with schools or local NGOs to teach digital finance as part of basic education, bridging generational literacy gaps.
- **AI Ethics and Trust Layer** Introduce transparency dashboards showing agent decisions, data sources, and steps taken to protect user privacy and safety.

IBM CERTIFICATIONS



IBM CERTIFICATIONS



IBM **SkillsBuild**

Completion Certificate



This certificate is presented to
Vaishnav Bharambe

for the completion of

**Lab: Retrieval Augmented Generation with
LangChain**

(ALM-COURSE_3824998)

According to the Adobe Learning Manager system of record

Completion date: 25 Jul 2025 (GMT)

Learning hours: 20 mins



THANK YOU