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# CAPSTONE PROJECT

## MONEYMITRA AI AGENT

**Student Name** : Atul Sharma

**College Name & Department** : ITS ENGINEERING COLLEGE  
GREATER NOIDA (BTech-CSE)

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# OUTLINE

- **Problem Statement**
- **Technology used**
- **Wow factor**
- **End users**
- **Result**
- **Conclusion**
- **Future scope**
- **IBM Certifications**
- **Git-hub Link**

# PROBLEM STATEMENT

In today's rapidly digitizing economy, a large portion of the population—especially in rural and semi-urban areas—lacks the essential knowledge and confidence to use digital financial tools such as UPI, internet banking, digital wallets, and online loan platforms.

This gap in financial literacy often leads to:

- Misuse of services
- Increased vulnerability to online frauds and scams
- Poor personal financial decisions
- Traditional awareness programs are limited in reach, language support, and personalization. There is a pressing need for a scalable, multilingual, AI-driven solution that provides accurate, real-time, and user-friendly financial education tailored to individual needs.

# PROPOSED SOLUTION

- An AI Agent powered by IBM Granite model and deployed on IBM Cloud Lite, using Retrieval-Augmented Generation (RAG), to deliver interactive financial literacy support in simple language. It helps users safely navigate digital financial services and empowers them with knowledge to make smarter money decisions.

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# TECHNOLOGY USED

## **IBM Cloud Lite Services:**

Hosting the AI application using Watsonx tools with limited but sufficient compute resources for prototyping and deployment.

## **IBM Watsonx.ai:**

Used to build and test prompts.

## **IBM Granite Foundation Model**

Large Language Model (LLM) for answering user queries in natural, simple language.

## **Retrieval-Augmented Generation (RAG)**

Combines search (retrieval) and generation for accurate and context-aware answers.

## **NLP**

Supports queries and responses in multiple languages

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## IBM CLOUD SERVICES USED

**IBM Watsonx.ai Studio** : To design, test, and refine prompts for the AI agent.

**IBM Watsonx.ai Runtime** : Executes AI model calls (Granite LLM) during live interactions with users.

**IBM Granite Foundation Models** : Natural language understanding and response generation.

**IBM Cloud Object Storage** : To store financial FAQs, policy documents, and educational content in a centralized location.

**IBM Cloud Lite Account** : It's used to experiment, develop, and deploy lightweight cloud applications

# WOW FACTORS

**Multilingual Financial Guidance** : Supports queries in regional languages (like Hindi, Tamil, Bengali, etc.) to help diverse users understand digital finance in their own language.

**AI-Powered Real-Time Responses** : Uses IBM Granite LLM and RAG to generate instant, easy-to-understand answers about UPI, banking, savings, budgeting, etc.

**Scam & Fraud Awareness Assistant** : Actively educates users on how to detect and avoid common online financial frauds, phishing, and scams.

**Smart Retrieval from Trusted Sources** : Retrieves content from verified government and bank websites like RBI, NPCI, and SEBI using vector search and embeddings.

**User-Friendly, No App Required** : Can be deployed as a web-based chatbot—no need to download any app, making it accessible even on low-end devices.

**Personalized Financial Learning** : Responds to users based on their level of understanding—ideal for beginners, students, and senior citizens.

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## END USERS

**General Public (Urban & Rural)** : Individuals seeking to understand UPI, digital banking, EMI, and budgeting

**Students & Youth** : Young adults starting to manage their finances independently.

**Senior Citizens** : Elderly individuals unfamiliar with smartphones and digital banking.

**Small Business Owners & Vendors** : Kirana store owners, street vendors, shopkeepers transitioning to UPI & QR code.

**Women in Semi-Urban/Rural Areas** : Women accessing financial services through government schemes or SHGs

**Financial Literacy Campaigns / NGOs** : Organizations promoting safe digital transactions and saving habits.

**Government Schemes & CSC Centers** : Common Service Centers (CSCs) or banks promoting digital banking adoption

**Educators / Trainers** : Teachers or trainers using it as a support tool in financial education programs



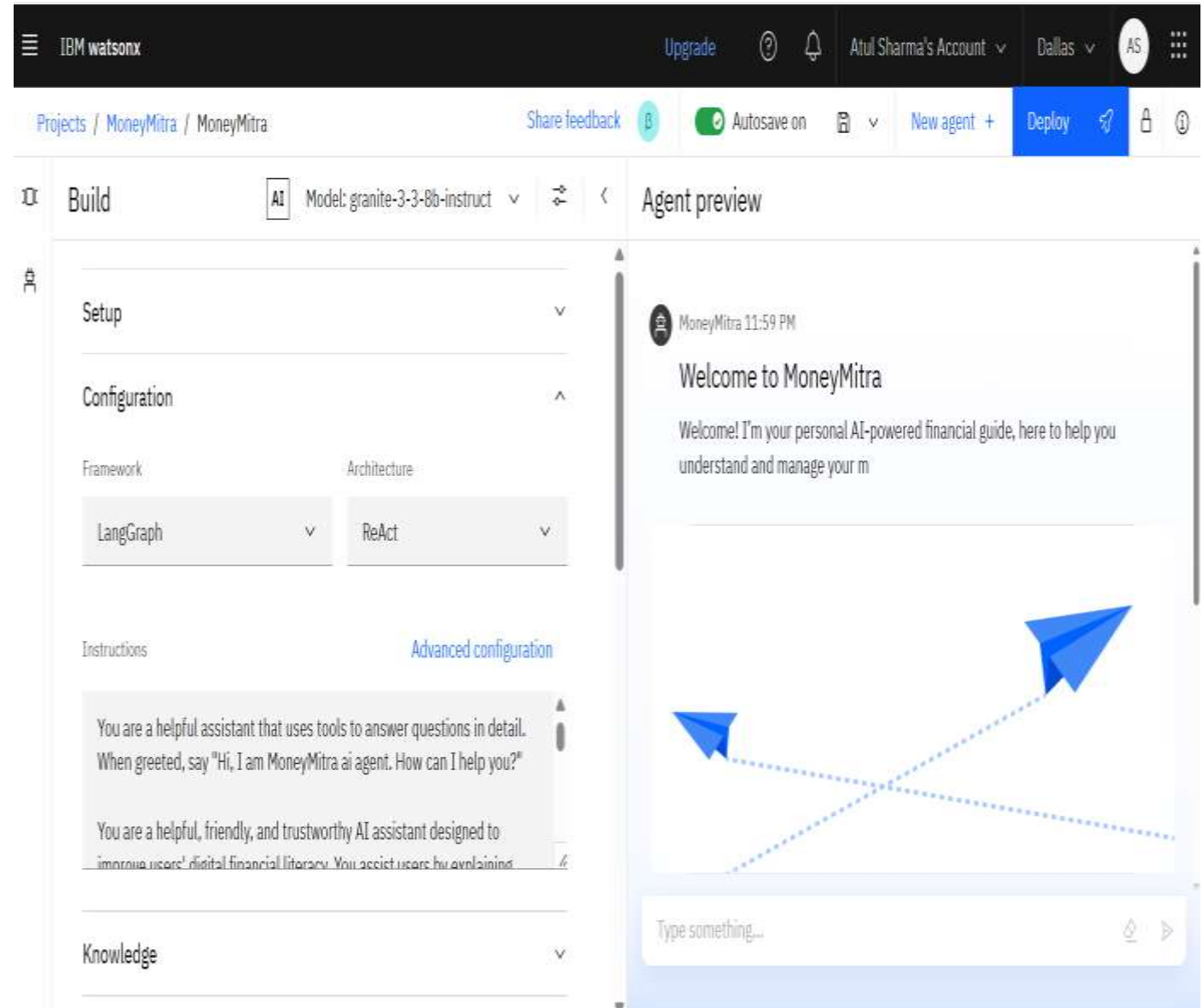
# RESULTS

**Successfully deployed an AI Agent on IBM Cloud Lite :**

Integrated IBM Watsonx and Granite model to deliver real-time, accurate, and multilingual responses to finance-related user queries.

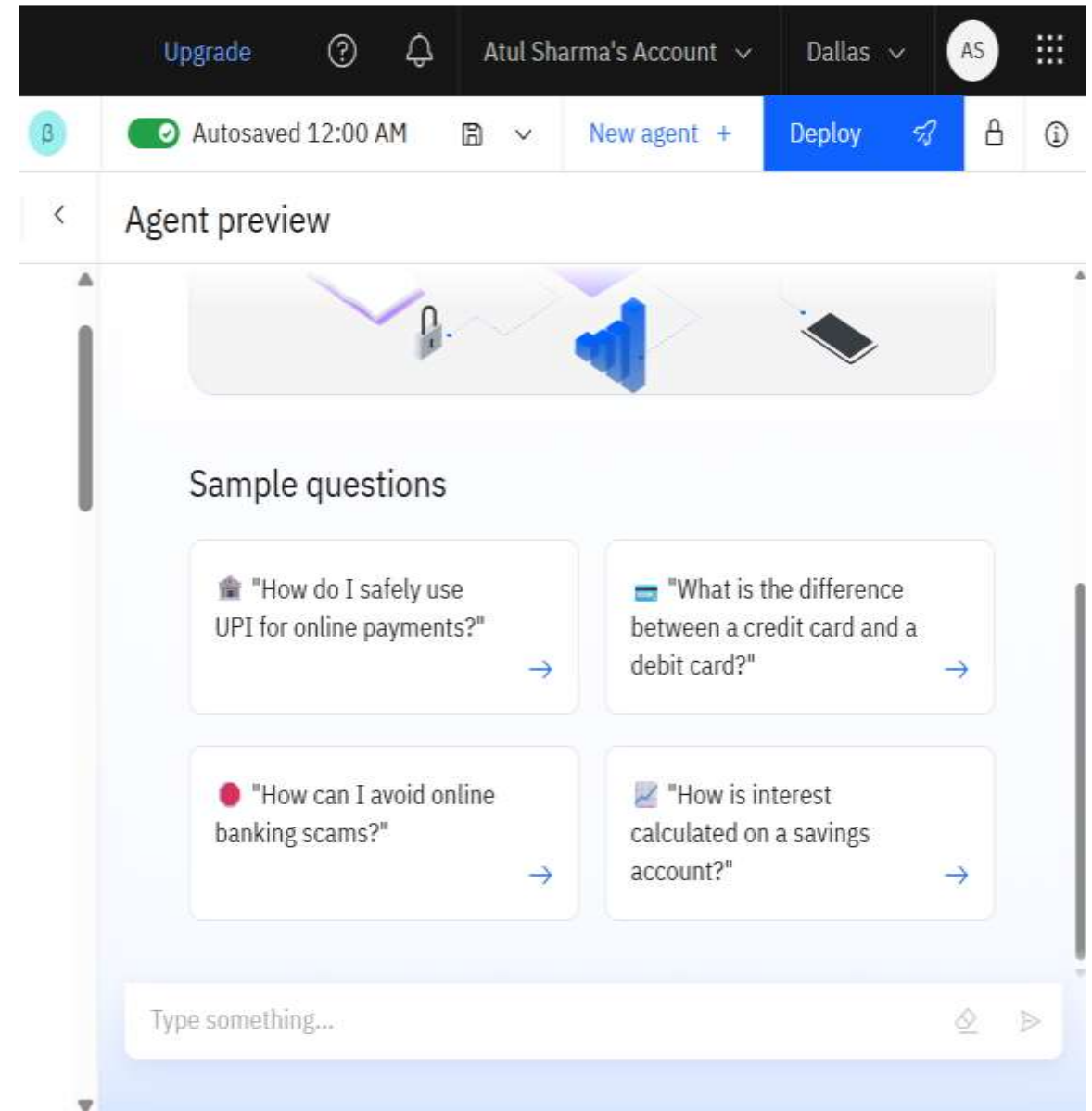
**Enabled users to understand and use digital financial tools safely :**

Provided simplified guidance on UPI, online scams, budgeting, and digital payments, improving user confidence and awareness.



# RESULTS

## Quick Start Question



# RESULTS

**Increased user confidence in digital financial platforms** : Helped users avoid scams and make informed financial decisions.

**Validated queries with real-world use cases and feedback** : Tested questions like “How to use UPI safely?” and “What is EMI?” with successful results.

## Agent preview



You: 12:18 AM



"How do I safely use UPI for online payments?"



MoneyMitra 12:18 AM

Hi there! Using UPI (Unified Payments Interface) for online payments can be a safe and convenient way to make transactions. Here are some tips to ensure your UPI payments are secure:

1. **Use Official Apps:** Only use official UPI apps like Google Pay, PhonePe, Paytm, BHIM, etc. These apps are regulated and have robust security measures in place.
2. **Keep Your Apps Updated:** Always ensure that your UPI apps are updated to the latest version. Updates often include security patches that protect against the latest threats.

Type something...



# RESULTS

## Deployed AI Agent

The screenshot displays the IBM Watsonx user interface. At the top, the navigation bar includes the IBM Watsonx logo, an 'Upgrade' button, a help icon, a notification bell, the user's account 'Atul Sharma's Account', the location 'Dallas', and a profile icon 'AS'. The breadcrumb trail indicates the path: 'Deployment spaces / MoneyMitra / MoneyMitra /'. The main content area is titled 'MoneyMitra' with a green checkmark and the status 'Deployed Online'. Below this, there are three tabs: 'API reference' (selected), 'Test', and 'Preview'. The 'API reference' tab shows 'Endpoints for inferencing' with a list of private and public endpoints, each with a copy icon. To the right of the endpoints is a 'Bearer <token>' field containing 'IAM'. On the right side of the console, a sidebar titled 'About this deployment' provides details: Name (MoneyMitra), Description (Welcome! I'm your personal AI-powered financial guide, here to help you understand and manage your m), Deployment Details (ID: 3348136b-8be9-4e..., Serving name: No serving name., Software specification: runtime-24.1-py3.11, Hardware specification: Extra extra small: 1 CPU and 2 GB RAM, Copies: 1), and Tags.

IBM watsonx Upgrade ? Bell Atul Sharma's Account Dallas AS

Deployment spaces / MoneyMitra / MoneyMitra /

### MoneyMitra ✓ Deployed Online

API reference Test Preview

#### Endpoints for inferencing ⓘ

Private endpoint

- <https://us-south.ml.cloud.ibm.com/ml/v4/deployments/3348136b-8be9-4eda-8363-...>
- <https://us-south.ml.cloud.ibm.com/ml/v4/deployments/3348136b-8be9-4eda-8363-...>

Public endpoint

- <https://us-south.ml.cloud.ibm.com/ml/v4/deployments/3348136b-8be9-4eda-8363-...>
- <https://us-south.ml.cloud.ibm.com/ml/v4/deployments/3348136b-8be9-4eda-8363-...>

Bearer <token> ⓘ

IAM

#### About this deployment

**Name** MoneyMitra

**Description** Welcome! I'm your personal AI-powered financial guide, here to help you understand and manage your m

**Deployment Details**

- Deployment ID: 3348136b-8be9-4e...
- Serving name: No serving name.
- Software specification: runtime-24.1-py3.11
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**Tags**

# RESULTS

## Tools Used

The screenshot displays the IBM watsonx interface. The top navigation bar includes the IBM watsonx logo, an 'Upgrade' button, a help icon, a notification bell, and user account information for 'Atul Sharma's Account' in 'Dallas'. The breadcrumb trail shows 'Projects / MoneyMitra / MoneyMitra'. The main interface is split into two panels. The left panel, titled 'Build', shows a list of 'Added tools (5)': Google search, DuckDuckGo search, Wikipedia search, Webcrawler, and Weather. Each tool has a description and a trash icon. The right panel, titled 'Agent preview', shows a conversation log. The user asks, 'How do I safely use UPI for online payments?'. The agent, MoneyMitra, responds with a helpful message and two numbered tips: 1. Use Official Apps and 2. Keep Your Apps Updated. A text input field at the bottom of the chat area contains the placeholder text 'Type something...'. The interface also features a 'Deploy' button and a 'New agent +' button in the top right corner.

IBM watsonx

Upgrade ? Bell Atul Sharma's Account Dallas AS

Projects / MoneyMitra / MoneyMitra Share feedback Autosaved 12:18 AM New agent + Deploy

**Build** AI Model: granite-3-3-8b-instruct

Added tools (5)

- Google search**  
Retrieve information from the internet with the Google search engine.
- DuckDuckGo search**  
Retrieve information from the internet with the DuckDuckGo search engine.
- Wikipedia search**  
Retrieve information from Wikipedia articles.
- Webcrawler**  
Retrieve information from a website.
- Weather**

**Agent preview**

**You:** 12:18 AM  
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**MoneyMitra:** 12:18 AM  
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- 1. Use Official Apps:** Only use official UPI apps like Google Pay, PhonePe, Paytm, BHIM, etc. These apps are regulated and have robust security measures in place.
- 2. Keep Your Apps Updated:** Always ensure that your UPI apps are updated to the latest version. Updates often include security patches that protect against the latest threats.

Type something...

## CONCLUSION

- The AI Agent for Digital Financial Literacy successfully demonstrates how advanced AI technologies like IBM Granite and Retrieval-Augmented Generation (RAG) can be used to educate and empower users with essential financial knowledge.
- By providing multilingual, real-time, and trustworthy guidance on digital financial tools such as UPI, online banking, and budgeting, the agent:
- Bridges the gap between people and digital finance
- Helps users avoid online scams and misuse
- Encourages responsible money management, especially among underserved populations
- The project showcases how AI, even on IBM Cloud Lite (free tier), can drive financial inclusion and support national goals like Digital India.

# FUTURE SCOPE

- **Voice-Based Assistant Integration** : Enable users to interact using voice commands in their native language, making it accessible to non-literate or elderly users.
- **Mobile App Deployment** : Launch a lightweight Android/iOS app version for offline and on-the-go access in low-connectivity areas.
- **Integration with Real-Time Banking APIs** : Provide live updates on interest rates, new schemes, loan offers, and financial news from trusted banking sources.
- **Gamified Financial Learning** : Introduce quizzes, rewards, and learning levels to make financial education engaging and fun, especially for youth.
- **Advanced Fraud Detection Awareness** : Expand the agent to provide scenario-based fraud detection simulations and alerts about trending scam patterns.



# IBM CERTIFICATIONS

In recognition of the commitment to achieve professional excellence



## Atul Sharma

Has successfully satisfied the requirements for:

### Getting Started with Artificial Intelligence



Issued on: Jul 19, 2025

Issued by: IBM SkillsBuild

Verify: <https://www.credly.com/badges/5381c9e9-aaa9-40e3-9b2b-588107890e07>





IBM **SkillsBuild**

Completion Certificate



This certificate is presented to

Atul Sharma

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

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## GITHUB LINK

- [View Project On GitHub](#)



**THANK YOU**