
CAPSTONE PROJECT

AI AGENT FOR DIGITAL FINANCIAL LITERACY

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OUTLINE

- Υ Problem Statement
- Υ Technology used
- Υ Wow factor
- Υ End users
- Υ Result
- Υ Conclusion
- Υ Future scope
- Υ IBM Certifications

PROBLEM STATEMENT

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 ?”

Proposed Solution:

An AI Agent powered by Retrieval-Augmented Generation (RAG), using IBM Cloud & Granite, to answer user queries, guide financial decisions, and educate people on secure digital finance.

TECHNOLOGY USED

- Y IBM Cloud Lite Services**
- Y IBM Watsonx AI Studio**
- Y IBM Granite Foundation Model**
- Y Retrieval-Augmented Generation (RAG)**
- Y Natural Language Processing (NLP)**
- Y Multilingual Support**
- Y Secure API Integrations with Govt/Bank portals**

IBM CLOUD SERVICES USED

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

WOW FACTORS

- Y 24/7 financial assistant in multiple languages
- Y Instant answer to questions like:
- Y How to avoid UPI fraud?
- Y What's a safe interest rate?
- Y Retrieves trusted info from RBI, Govt portals, banks
- Y Safe, private, and inclusive learning
- Y Voice + text query support for accessibility

END USERS

- General Public (rural and urban)
- Senior Citizens
- First-time digital users
- Students and Young Adults
- NGOs promoting financial inclusion
- Government outreach programs

RESULTS

Preview :

Agent Lab (beta) — Docs | IBM

Agent Lab — Finance related |

dataplatfom.cloud.ibm.com/wx/agents?context=wx&project_id=d8545e7c-a5eb-4f48-a649-ebb63a8dc1d0

Incognito

IBM watsonx

Upgrade

Shreyash Kadam's Account

Dallas

SK

Projects / Finance related / Agent Lab

Share feedback

Unsaved

New agent

Deploy

Build

AI

Model: llama-3-3-70b-instruct

Setup

Name

Your Financial guide

Description

I may advise you in your financial managment....

Icon

Placeholder image

Quick start questions

Add up to 4 quick start questions that your users can select.

Agent preview

SK You: 02:53 PM

I received a message saying my bank account will be blocked unless I click a link. How do I know if this is a scam, and what should I do next?

Your Financial guide 02:53 PM

To determine if the message you received is a scam, you can look for red flags such as being contacted out of the blue, being pressured to act immediately, or being asked to pay in an unusual way. You can also check the website of your bank or the Federal Trade Commission (FTC) for information on how to identify and avoid scams. If you suspect that the message is a scam, do not click on the link and do not provide any personal or financial information. Instead, contact your bank directly to verify the authenticity of the message. You can also report the scam to the FTC or your local authorities.

How did I get this answer?

SK You: 02:53 PM

I received a message saying my bank account will be blocked unless I click a link. How do I know if this is a scam, and what should I do next?

Your Financial guide 02:53 PM

To determine if the message you received is a scam, you can look for red flags such as being contacted out of the blue, being pressured to act immediately, or being asked to pay in an unusual way. You can also check the website of your bank or the Federal Trade Commission (FTC) for information on how to identify and avoid scams. If you suspect that the message is a scam, do not click on the link and do not provide any personal or financial information. Instead, contact your bank directly to verify the authenticity of the message. You can also report the scam to the FTC or your local authorities.

Type something...

RESULTS

Preview :

The screenshot displays the IBM Watsonx Agent Lab interface. The browser address bar shows the URL: `datapatform.cloud.ibm.com/wx/agents?context=wx&project_id=d8545e7c-a5eb-4f48-a649-ebb63a8dc1d0`. The interface includes a top navigation bar with the IBM Watsonx logo, an 'Upgrade' button, a help icon, a notification bell, and a user profile for 'Shreyash Kadam's Account'. Below this is a breadcrumb trail: 'Projects / Finance related / Agent Lab'. The main interface is divided into two panels. The left panel, titled 'Build', contains a 'Setup' section with fields for 'Name' (filled with 'Your Financial guide') and 'Description' (filled with 'I may advise you in your financial managment....'). Below these is an 'Icon' section with a robot icon and a 'Placeholder image' section with a diagram of a network. At the bottom of the 'Build' panel is a 'Quick start questions' section with a text input field and a plus icon. The right panel, titled 'Agent preview', shows a chat history with a user message: 'Can you explain how UPI works internally and whether it's safe to use for large transactions like paying rent or buying a vehicle?' and an AI response: 'UPI (Unified Payments Interface) is a payment system that allows users to make transactions between bank accounts using a virtual address. It works by creating a unique virtual address for each user, which can be used to send and receive money. The system is supported by almost all Indian banks and has become a popular method for making digital payments in India. To use UPI, users need to download a UPI-enabled app from their bank or a third-party provider, and then link their bank account to the app. They can then create a virtual address, which can be used to send and receive money. The system uses a secure messaging system to coordinate transactions between banks, and it is available for all public issues for which UPI is a payment mechanism. UPI is considered to be a safe and secure way to make transactions, as it uses a secure messaging system and is supported by almost all Indian banks. However, as with any digital payment system, there are some risks associated with using UPI, such as the risk of fraud or hacking. To minimize these risks, users should ensure that they are using a reputable UPI-enabled app, and that they are keeping their virtual address and password secure. In terms of using UPI for large transactions, such as paying rent or buying a vehicle, it is generally considered to be a safe and secure way to make these types of transactions. However, users'. At the bottom of the 'Agent preview' panel is a text input field with the placeholder text 'Type something...'. The interface also includes a 'Share feedback' button, an 'Unsaved' status indicator, a 'New agent +' button, and a 'Deploy' button.

RESULTS

Preview :

The screenshot displays the IBM watsonx Agent Lab interface. The browser address bar shows the URL: `dataplatfom.cloud.ibm.com/wx/agents?context=wx&project_id=d8545e7c-a5eb-4f48-a649-ebb63a8dc1d0`. The page header includes the IBM watsonx logo, an 'Upgrade' button, a help icon, a notification bell, and user information for 'Shreyash Kadam's Account' in 'Dallas'. The main navigation bar shows 'Projects / Finance related / Agent Lab' and buttons for 'Share feedback', 'Unsaved', 'New agent', and 'Deploy'.

The interface is divided into two main sections: 'Sample agents' and 'Agent preview'.

Sample agents section:

- Model:** llama-3-3-70b-instruct
- Setup:**
 - Name:** Your Financial guide
 - Description:** I may advise you in your financial managment.... (48/100 characters)
 - Icon:** A robot icon.
 - Placeholder image:** A diagram showing a flowchart with a green circle and a blue magnifying glass.
 - Quick start questions:** Add up to 4 quick start questions that your users can select.

Agent preview section:

You: 02:58 PM

What steps should I follow to create a personal monthly budget, track expenses, and set savings goals if I earn ₹25,000 per month?

Your Financial guide 02:58 PM

To create a personal monthly budget, track expenses, and set savings goals if you earn ₹25,000 per month, you can follow these steps:

1. Identify your priorities and goals: Start by identifying your financial priorities and goals, such as saving for a specific purpose, paying off debt, or building an emergency fund.
2. Create a budget document: Create a budget document that outlines your estimated monthly income and expenses. You can use a spreadsheet or a budgeting app to make it easier.
3. Track your actual spending: Track your actual spending and compare it to your budget. This will help you identify areas where you can cut back and make adjustments to your budget.
4. Set realistic spending limits: Set specific and realistic spending limits for each category of expenses. Make sure to prioritize your needs over your wants.
5. Use the 50/30/20 rule: Allocate 50% of your income towards necessary expenses like rent, utilities, and groceries. Use 30% for discretionary spending like entertainment, hobbies, and travel. And, put 20% towards saving and debt repayment.
6. Review and adjust: Regularly review your budget and adjust as needed. Make sure to track your progress and make changes to your budget to ensure you're on track to meet your financial goals.

Type something...

RESULTS

Preview :

The screenshot displays the IBM Watsonx Agent Lab interface. The top navigation bar includes the IBM Watsonx logo, an 'Upgrade' button, a user profile for 'Shreyash Kadam', and a 'Deploy' button. The main content area is divided into two panels: 'Build' and 'Agent preview'.

Build Panel:

- Model:** llama-3-3-70b-instruct
- Setup:**
 - Name:** Your Financial guide
 - Description:** I may advise you in your financial managment.... (48/100 characters)
 - Icon:** A placeholder image of a robot head.
 - Placeholder image:** A placeholder image of a magnifying glass over a document.
 - Quick start questions:** Add up to 4 quick start questions that your users can select.

Agent preview Panel:

- You:** 03:09 PM. What are the safest investment options for someone with low income who wants to start saving for their child's education?
- Your Financial guide:** 03:09 PM. Based on the search engine results, the safest investment options for someone with low income who wants to start saving for their child's education are:
 - 529 college savings plans: These plans offer tax benefits and flexibility in terms of investment options. They are also relatively low-risk and can be used to save for higher education expenses.
 - High-yield savings accounts: These accounts offer a higher interest rate than traditional savings accounts and are FDIC-insured, making them a low-risk option.
 - Index funds or ETFs: These investments track a specific market index, such as the S&P 500, and offer broad diversification and potentially lower fees than actively managed funds.
 - U.S. Treasury bonds: These bonds are backed by the full faith and credit of the U.S. government and offer a low-risk investment option with a fixed return.
 - Certificates of deposit (CDs): CDs are time deposits offered by banks with a fixed interest rate and maturity date. They tend to be low-risk and provide a fixed return, but you'll face penalties for early withdrawal.
- Footer:** It's important to note that while these options are considered safe, they may not offer the highest returns. It's always a good idea to consult with a financial advisor or conduct your own research.

RESULTS

Preview :

The screenshot displays the IBM watsonx Agent Lab interface. The top navigation bar includes the IBM watsonx logo, an 'Upgrade' button, a help icon, a notification bell, and a user profile for 'Shreyash Kadam's Account' with a dropdown menu. The breadcrumb trail shows 'Projects / Finance related / Agent Lab'. The main interface is split into two panels. The left panel, titled 'Build', contains a 'Setup' section with fields for 'Name' (filled with 'Your Financial guide') and 'Description' (filled with 'I may advise you in your financial managment....'). Below these is an 'Icon' section with a robot icon and a 'Placeholder image' section with a diagram. At the bottom is a 'Quick start questions' section with a text input and a plus button. The right panel, titled 'Agent preview', shows a conversation history. It starts with a user message (SK) asking about legal rights regarding online loan harassment. The agent's response (Your Financial guide) provides a list of five steps to handle the situation and a concluding statement about legal rights. At the bottom of the preview panel is a text input field with the placeholder 'Type something...'. The browser's address bar shows the URL 'dataplatfrom.cloud.ibm.com/wx/agents?context=wx&project_id=d8545e7c-a5eb-4f48-a649-ebb63a8dc1d0'.

Agent Lab (beta) — Docs | IBM x Agent Lab — Finance related | x +

dataplatfrom.cloud.ibm.com/wx/agents?context=wx&project_id=d8545e7c-a5eb-4f48-a649-ebb63a8dc1d0

IBM watsonx Upgrade ? Shreyash Kadam's Account Dallas SK

Projects / Finance related / Agent Lab Share feedback β Unsaved New agent + Deploy

Build AI Model: llama-3-3-70b-instruct

Setup

Name

Your Financial guide

Description 48/100

I may advise you in your financial managment....

Icon Placeholder image

Quick start questions

Add up to 4 quick start questions that your users can select. +

Agent preview

► How did I get this answer?

SK You: 03:11 PM

I took a loan from an online app, and now they are threatening me with calls and messages. What are my rights, and how can I stop them legally?

Your Financial guide 03:11 PM

If you're being harassed by an online loan app, you have the right to stop them legally. Here are some steps you can take:

1. Contact the Civil Rights Division of the Department of Justice to report the harassment and seek assistance.
2. File a complaint with the Consumer Financial Protection Bureau or your state's Attorney General office.
3. Reach out to the Illinois Department of Human Rights or the New York State Attorney General's office for guidance on how to handle the situation.
4. Familiarize yourself with the Texas Debt Collection Act and the Fair Debt Collection Practices Act (FDCPA) to understand your rights and the penalties for violators.
5. Consider seeking help from a non-profit credit counseling agency or a financial advisor to help you manage your debt and stop the harassment.

Remember, you have the right to be treated fairly and with respect, and there are laws in place to protect you from harassment and discrimination. Don't hesitate to reach out for help and support.

Type something...

RESULTS

Create deployment space :

Agent Lab (beta) — Docs | IBM

Your Financial guide — Finance

IBM watsonx

Settings | IBM watsonx

dataplatform.cloud.ibm.com/ml-runtime/spaces/create-space?context=wx

Reload this page

Incognito

IBM watsonx

Upgrade

Shreyash Kadam's Account

Dallas

SK

Create a deployment space

Use a space to collect assets in one place to create, run, and manage deployments

+ New

Local file

Define details

Name

Financial Guide

Description (Optional)

0/100

What's the purpose of this space?

Deployment stage ⓘ

Testing

Tags (optional)

Find or create tags

Cancel

Create

RESULTS

deployment :

Agent Lab (beta) — Docs | IBMFinancial Guide — Spaces | IBMDeployments | IBM watsonxSettings | IBM watsonx

dataplatfom.cloud.ibm.com/ml-runtime/spaces/35f43492-02ce-4f0b-a30c-6a0a06d8c345/deployments?context=wxIncognito



IBM watsonxUpgradeShreyash Kadam's AccountDallasSK

Deployment spaces /

Financial Guide

OverviewAssetsDeploymentsJobsManage

Search

Name	Type	Status	Asset	Asset type	Tags	Last modified
 Your Financial guide	Online	 Deployed	Your Financial guide	Ai service	wx-agent	1 minute ago Shreyash Kadam (You)

Items per page: 201–1 of 1 items1 of 1 pages

CONCLUSION

- Y The AI Agent for Digital Financial Literacy is a vital tool designed to make financial knowledge accessible, secure, and personalized. It helps users understand key financial topics—like UPI, interest rates, budgeting, and scams—through a simple, multilingual AI interface.
- Y By using IBM Cloud Lite, Granite, and RAG, the agent delivers real-time, reliable information from trusted sources like government portals and banking websites.
- Y Plan and track expenses
- Y Make safer digital transactions
- Y Understand loans, savings, and interest rates
- Y Avoid fraud through awareness and alerts

FUTURE SCOPE

- Connect with WhatsApp & SMS for rural outreach
- Add voice and video tutorials for better engagement
- AI-generated monthly spending reports
- Expand to sectors like agriculture finance, micro-loans
- Partner with banks for real-time loan/product suggestions

IBM CERTIFICATIONS

1. credly certificate(getting started with AI) :



IBM CERTIFICATIONS

2. credly certificate(journey to cloud) :



IBM CERTIFICATIONS

3. Rag lab certificate :

IBM SkillsBuild

Completion Certificate



This certificate is presented to

Shreyash Kadam

for the completion of

Lab: Retrieval Augmented Generation with LangChain

(ALM-COURSE_3824998)

According to the Adobe Learning Manager system of record

Completion date: 02 Aug 2025 (GMT)

Learning hours: 20 mins

**"The goal of financial literacy is not wealth — it's freedom.
Freedom from fear, from fraud, and from ignorance."**

THANK YOU!