
CAPSTONE PROJECT

AI AGENT FOR DIGITAL FINANCIAL LITERACY

Presented By:

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OUTLINE

- **Problem Statement**
- **Proposed System/Solution**
- **System Development Approach (Technology Used)**
- **Algorithm & Deployment**
- **Result (Output Image)**
- **Conclusion**
- **Future Scope**
- **References**

PROBLEM STATEMENT

Despite the widespread growth of digital finance tools like UPI, many citizens still struggle with understanding how to safely use them. Users are often vulnerable to online fraud, do not understand interest rates or loans, and lack financial literacy. These challenges are more severe in rural and semi-urban areas, where users may also face language barriers.

PROPOSED SOLUTION

- We propose an AI-powered multilingual Digital Financial Literacy Agent that:
- Answers user questions in their preferred language (e.g., Hindi)
- Uses Retrieval-Augmented Generation (RAG) to fetch content from RBI, NPCI, and trusted banking sources
- Guides users on safe UPI usage, budgeting, EMI, online scam detection, and personal finance
- Uses IBM Granite for natural language understanding and response generation

SYSTEM APPROACH

- **System requirements**
 - ❖ IBM cloud lite services
 - ❖ Natural Language Processing (NLP)
 - ❖ Retrieval Augmented Generation (RAG)
 - ❖ IBM Granite model
- **Library required to build the model**
 - ❖ IBM-Watsonx

ALGORITHM & DEPLOYMENT

- Algorithm Selection:
- Retrieval-Augmented Generation (RAG) using IBM Granite
- Input Data:
- User question (e.g., "How can I start saving money as a student?")
- Embedded vector database with verified financial documents-

For example-

- (a). RBI's UPI User Guide
- (b). Online Banking – Do's and Don'ts
- (c). Glossary of Banking Terms (Hindi/English)
- (d). Financial Fraud Awareness Brochure
- Training:
- IBM Granite LLM used with pre-processed document chunks
- No fine-tuning required due to powerful zero-shot capabilities
- Deployment:

- Flask backend deployed on IBM Cloud Lite
- IBM Watson used for Language Translation
- Frontend as a web app or chatbot interface
- IBM Object Storage holds all static PDFs

RESULT

The screenshot displays a web browser window with multiple tabs. The active tab is 'FinSaathi AI — FinSaathi AI', showing a URL from 'dataplatfom.cloud.ibm.com'. The page header includes 'IBM watsonx' and user information 'Amar Deep Jha's Account'. The main content area shows the 'FinSaathi AI' deployment status as 'Deployed' and 'Online'. Below this, there are tabs for 'API reference', 'Test', and 'Preview', with 'Preview' being the active tab. The chat interface shows a user asking 'How much emergency fund should I maintain?' and the AI responding with advice on emergency funds, including a list of steps to calculate it. The chat input field at the bottom contains the placeholder text 'Type something...'. The Windows taskbar at the bottom shows the date as 02-08-2025 and the time as 18:13.

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FinSaathi AI

✅ Deployed Online

API reference Test **Preview**

New chat +

A You 06:13 PM
How much emergency fund should I maintain?

FinSaathi AI 06:13 PM
As a financial advisor, I can't give a specific amount for your emergency fund because it depends on your personal circumstances, such as your income, expenses, and financial obligations. However, a common rule of thumb is to have 3-6 months' worth of living expenses set aside for emergencies. This can help cover unexpected costs like medical emergencies, car repairs, or job loss.

Here's a simple way to calculate it:

1. List out your monthly expenses (rent/mortgage, utilities, groceries, transportation, etc.)
2. Multiply this total by 3 to 6 to get a range for your emergency fund.

Remember, this is a general guideline. You might need more or less depending on your situation. It's always a good idea to consult with a certified financial planner for personalized advice.

Type something... ➤

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RESULT

The screenshot shows a web browser window with multiple tabs. The active tab is 'FinSaathi AI — FinSaathi AI'. The address bar shows the URL: `dataplatfom.cloud.ibm.com/ml-runtime/deployments/57745184-6d04-4817-8a8c-5c1a6a81453e/chat?space_id=19fb05aa-1f97-4130-a2ae-2d843cbced59&context=wx&flush=true`. The page header includes the IBM Watsonx logo, an 'Upgrade' button, and user information for 'Amar Deep Jha's Account' in 'Dallas'. The breadcrumb trail is 'Deployment spaces / FinSaathi AI / FinSaathi AI /'. The main heading is 'FinSaathi AI' with a green 'Deployed' status and an 'Online' indicator. Below the heading are tabs for 'API reference', 'Test', and 'Preview', with 'Preview' being the active tab. A 'New chat +' button is in the top right. The chat interface shows a conversation where the user asks 'How can I start saving money as a student?'. The AI response provides advice on budgeting, setting savings goals, and creating a savings plan. At the bottom, there is a text input field with the placeholder 'Type something...'. The Windows taskbar at the bottom shows the date as 02-08-2025 and the time as 18:12.

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FinSaathi AI ✔️ Deployed Online

API reference Test **Preview**

New chat +

A You 06:12 PM
How can I start saving money as a student?

FinSaathi AI 06:12 PM
As a student, saving money can be a great way to build financial discipline and prepare for your future. Here are some simple steps to help you get started:

- Budgeting:** Start by understanding your income and expenses. Write down all your income sources (like part-time jobs, allowances, etc.) and list all your expenses (like tuition, books, food, transportation, entertainment, etc.).
- Set Savings Goals:** Decide what you're saving for. It could be for an upcoming trip, a new laptop, or your future education. Having clear goals can motivate you to save.
- Create a Savings Plan:** Once you know your goals, you can create a plan. Decide how much you can save each week or month. Even small amounts add up over time.

Type something... ➤

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CONCLUSION

- The agent makes digital finance safe and understandable for all.
- Uses IBM Granite to generate accurate, real-time answers
- Supports regional languages for inclusiveness
- Reduces risks of fraud and builds trust in digital transactions

FUTURE SCOPE

- WhatsApp and Voice integration for elderly users
- Real-time scam alerting using NLP-based detection
- Step-by-step voice instructions for actions like UPI transfers
- Personalized modules for students, workers, and senior citizens

REFERENCES

- <https://www.rbi.org.in>
- <https://www.npci.org.in>
- <https://www.financialliteracy.gov.in>
- IBM Granite and Watsonx.ai documentation

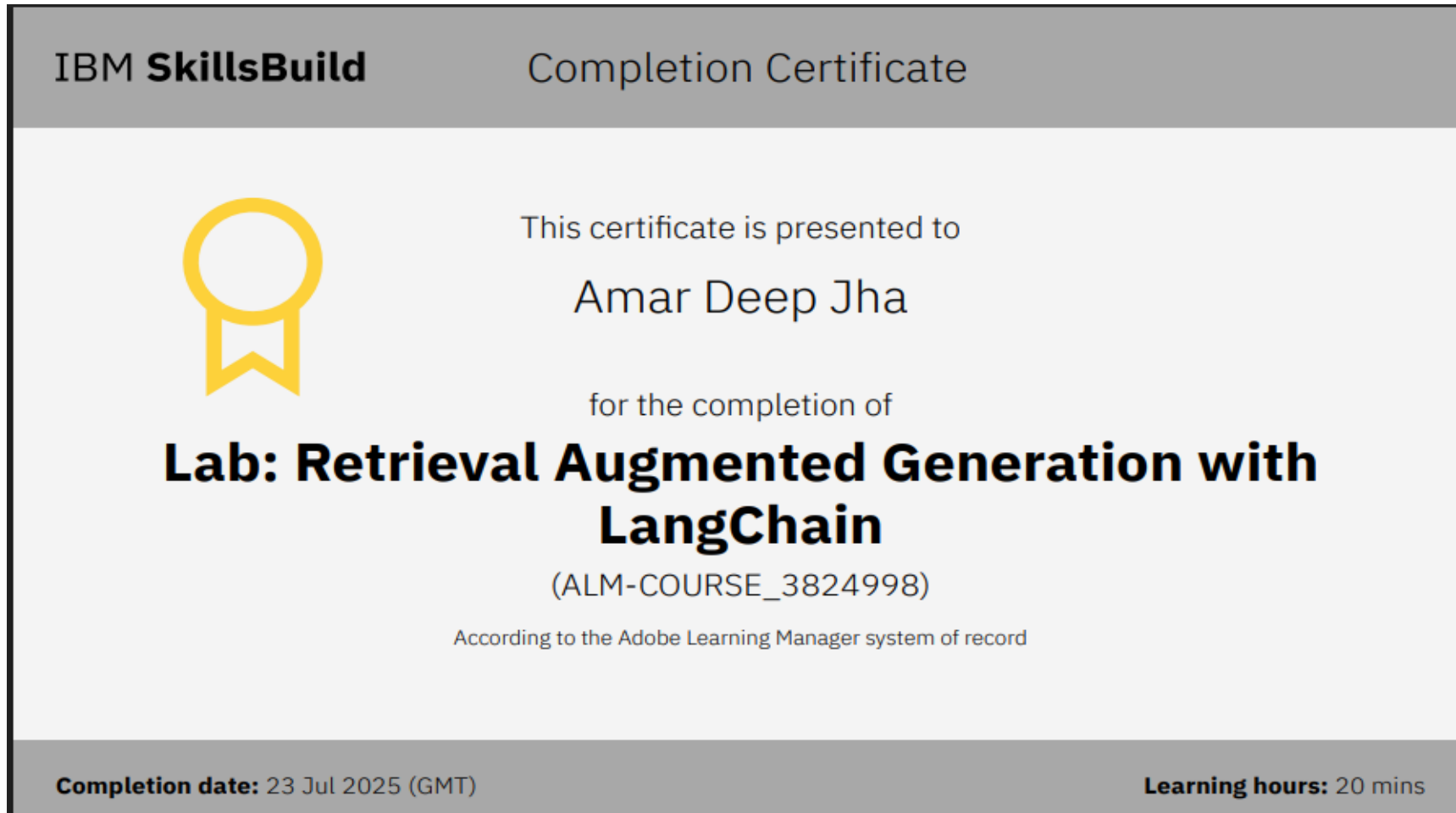
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THANK YOU