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# IBM AICTE PROJECT

## FINANCIAL AI AGENT

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## OUTLINE

- Problem Statement
- Technology used
- Wow factor
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- Conclusion
- Git-hub Link
- Future scope
- IBM Certifications

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# 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?”

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.

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# TECHNOLOGY USED

IBM cloud lite services

Natural Language Processing (NLP)

Retrieval Augmented Generation (RAG)

IBM Granite model

IBM Watsonx.ai.Studio

Vector index (Watsonx.ai)

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## IBM CLOUD SERVICES USED

- IBM Cloud Watsonx AI Studio
- IBM Cloud Watsonx AI runtime
- IBM Cloud Agent Lab
- IBM Granite foundation model
- IBM CLOUDE IAM
- IBM Cloud Object Storage

This project stands out because it addresses a real-world need by helping people understand and navigate digital financial

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## WOW FACTORS

This agent will significantly reduce research time, improve the quality of literature reviews, help early-stage researchers find direction, and foster interdisciplinary collaboration by making knowledge more accessible and actionable.

Unique features:

Semantic search across research papers, journals, and datasets

Auto-summarization of selected papers

Citation and reference analysis to trace influence

Recommendation of research papers based on a user's current topic

Trend analysis over time for specific keywords or domains.

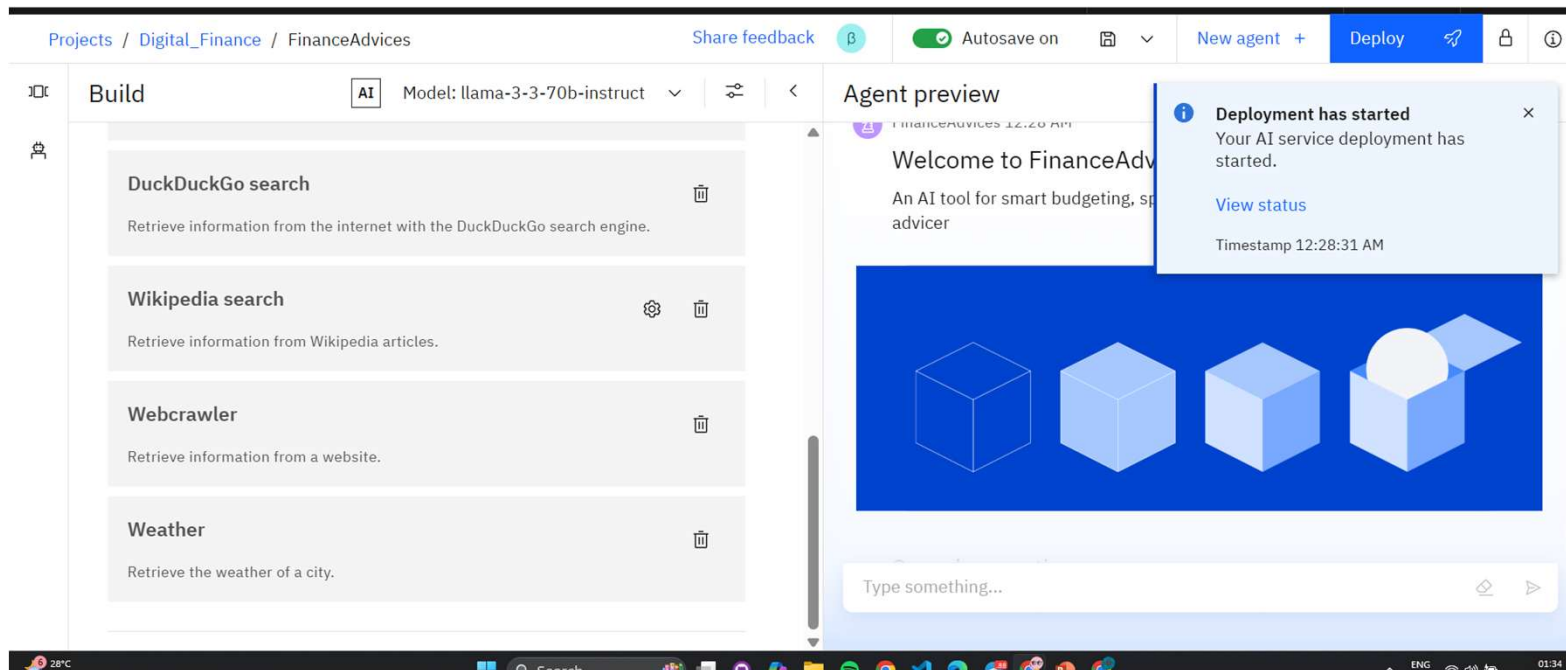
Collaboration mapping: suggests potential co-authors or institutions based on similar research interests.

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## END USERS

- General Public with Low Financial Literacy
- Non English speakers
- Students and young adults
- Senior citizen
- And first time digital user

## RESULTS - TOOLS





## RESULTS – SETTING UP

The screenshot displays the IBM watsonx AI Build interface. The top navigation bar includes the IBM watsonx logo, an 'Upgrade' button, a help icon, a notification bell, and user account information for 'Aniket Kumar's Account' in the 'Dallas' region. The breadcrumb trail shows 'Projects / Digital\_Finance / FinanceAdvices'. The main interface is divided into two panels: 'Build' and 'Agent preview'.

In the 'Build' panel, the 'Setup' tab is active. It shows the configuration for a new agent named 'FinanceAdvices'. The 'Name' field is filled with 'FinanceAdvices'. The 'Description' field contains the text 'An AI tool for smart budgeting, spending analysis, and personalized financial adviser', with a character count of 85/100. The 'Icon' field shows a placeholder image of a purple circle with a white chess knight icon. The 'Placeholder image' field shows a blue background with white cubes and a white sphere.

The 'Agent preview' panel shows a preview of the agent's interface. It includes a 'Welcome to FinanceAdvices' message, a description 'An AI tool for smart budgeting, spending analysis, and personalized financial adviser', and a chat input field with the placeholder text 'Type something...'. A notification banner at the top of the preview panel states 'Deployment has started' with the message 'Your AI service deployment has started.' and a 'View status' link. The timestamp for the deployment is '12:28:31 AM'.

# RESULTS – AGENT WORKING

The screenshot displays the IBM watsonx AI agent interface. The top navigation bar includes the IBM watsonx logo, an 'Upgrade' button, a help icon, a notification bell, the user's account 'Aniket Kumar's Account', the location 'Dallas', and a user profile icon 'AK'. Below this, a breadcrumb trail shows 'Projects / Digital\_Finance / FinanceAdvices', along with a 'Share feedback' link, a beta badge, an 'Autosave on' toggle, a 'New agent +' button, and a 'Deploy' button.

The main interface is split into two panels. The left panel, titled 'Build', shows the configuration for an AI agent. It includes a dropdown for the model 'llama-3-3-70b-instruct', a 'Configuration' section with 'Framework' set to 'LangGraph' and 'Architecture' set to 'ReAct', and an 'Instructions' section with the text 'Act as a reliable, multilingual AI assistant designed to promote digital...'. The right panel, titled 'Agent preview', shows a live interaction. It starts with a user message at 01:35 AM: 'How much should I save every month'. The agent, 'FinanceAdvices', responds at the same time with a detailed answer: 'The amount you should save each month depends on various factors, including your income, expenses, and financial goals. Many experts suggest saving between 10% and 20% of your monthly paycheck, while others recommend following the 50/30/20 rule, which allocates 20% of your income towards savings. It's also a good idea to aim to save enough to cover 3-6 months of essential expenses in case of emergencies. Ultimately, the key is to find a savings rate that works for you and your individual financial situation.' Below the response is a link 'How did I get this answer?' and a refresh icon. At the bottom of the preview panel is a text input field with the placeholder 'Type something...' and a send button.

# RESULTS

## Deployed AI Agent

The screenshot displays the IBM watsonx user interface. At the top, a dark navigation bar includes the 'IBM watsonx' logo, an 'Upgrade' button, and user account information for 'Aniket Kumar'. Below this, a breadcrumb trail shows the path: 'Deployment spaces / Finance Adviser / FinanceAdvices /'. The main content area is titled 'FinanceAdvices' and indicates the agent is 'Deployed' and 'Online'. Three tabs are visible: 'API reference', 'Test', and 'Preview', with the 'Preview' tab currently selected. The chat window shows a user query at 01:36 AM: 'Can you help me plan a budget?'. The agent's response, also at 01:36 AM, provides a 'step-by-step guide to planning a budget' with two numbered steps: '1. Estimate your monthly income.' and '2. Identify and estimate your monthly expenses.' A text input field at the bottom of the chat window contains the placeholder text 'Type something...'.

IBM watsonx Upgrade ? Aniket Kumar's Account Dallas AK

Deployment spaces / Finance Adviser / FinanceAdvices /

FinanceAdvices ✓ Deployed Online

API reference Test **Preview**

New chat +

**A** You 01:36 AM  
Can you help me plan a budget?

FinanceAdvices 01:36 AM  
Here's a step-by-step guide to planning a budget:

1. Estimate your monthly income.
2. Identify and estimate your monthly expenses.

Type something...

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## CONCLUSION

- The agent can generate reports, suggest hypotheses, and even draft sections of research papers.
- It saves time by automating repetitive tasks like citation management and data extraction.
- Research Agents enhance efficiency, accuracy, and innovation in both academic and industrial R&D.

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## FUTURE SCOPE

- Multilingual Research Support
- Voice-Activated Research Assistant
- Real-Time Collaboration Features
- Research Gap and Novel Topic Identification
- Integration with Publishing Platforms
- AI-Assisted Paper Drafting

# IBM CERTIFICATIONS

- Screenshot/ credly certificate( getting started with AI)




Attach your RAG LAB certificate here

7/30/25, 1:51 PM

Completion Certificate | SkillsBuild

IBM SkillsBuild

Completion Certificate



This certificate is presented to

aniket kumar

for the completion of

**Lab: Retrieval Augmented Generation with LangChain**

(ALM-COURSE\_3824998)

According to the Adobe Learning Manager system of record

Completion date: 30 Jul 2025 (GMT)

Learning hours: 20 mins

https://skillsbuild.adobe.com/certificates/ALM-COURSE\_3824998



Git hub link : <https://github.com/Aniketkumar2005/Finacial-Advisor---An-agentic-Ai-Project/tree/main>



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**THANK YOU**