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# CAPSTONE PROJECT

## STARTUP BLUEPRINT AI AGENT

PROBLEM STATEMENT NO.20

Presented By:

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**Department: CSE**

# OUTLINE

- **Problem Statement** (Should not include solution)
- **Proposed System/Solution**
- **System Development Approach** (Technology Used)
- **Algorithm & Deployment**
- **Result (Output Image)**
- **Conclusion**
- **Future Scope**
- **References**

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# PROBLEM STATEMENT – 20 - STARTUP BLUEPRINT GENERATOR AGENT

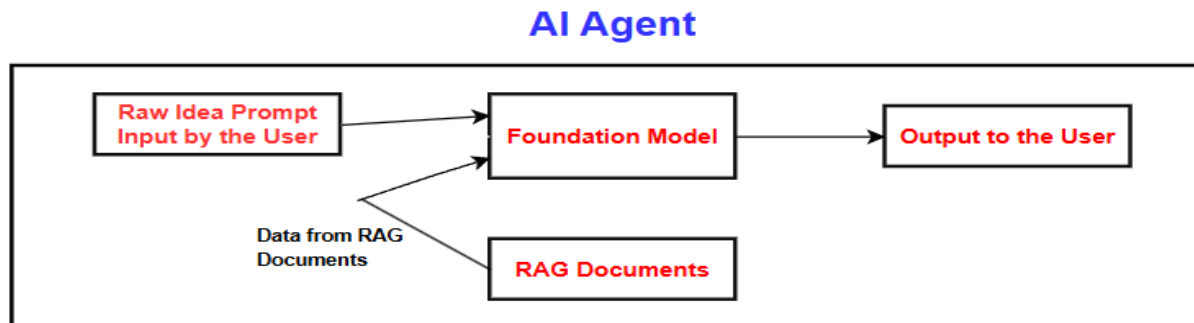
Aspiring entrepreneurs struggle to refine raw ideas into structured business plans due to limited industry knowledge and access to reliable data. Market research, competitor analysis, and funding options are time-consuming to gather manually, leading to uninformed decisions. Many startups fail early due to poor planning, regulatory gaps, or misaligned revenue models. Without expert guidance, founders face ambiguity in execution, slowing their journey from idea to launch. A streamlined solution is needed to simplify startup planning and reduce early-stage risks.

# PROPOSED SOLUTION

- The proposed solution is an AI-powered agent that transforms raw startup ideas into structured business blueprints by automatically analyzing market trends, funding options, and legal requirements. The solution will consist of the following components:
- Input Data:
  - The agent takes a raw start-up idea from a user.
  - The agent extracts relevant data from the RAG document (13 combined into 1 pdf) provided to it
  - Utilize real-time data sources, such as Google search, DuckDuckGo search, Wikipedia search, WebCrawler.
- AI Model and Configuration:
  - The agent uses a foundation model called Mistral Large (LLM provided by Mistral AI, and excellent for Agentic AI solutions).
  - Framework used by the agent is LangGraph
  - Architecture used by the agent is ReAct.
- Instruction:
  - The agent is given clear and appropriate instructions including its Role, Input Handling Parameters, Output Structure, Tone & Style, Prohibited (things not to do)
- Deployment:
  - Agent is deployed in a user-friendly interface and it provides solutions in a conversation manner.
  - Agent is deployed a scalable and reliable platform, considering factors like server infrastructure, response time, and user accessibility.
- Evaluation:
  - Agent can be evaluated based on the accuracy of its results and the conversation.
  - Further tuning can be done by appropriately amending the Instructions, RAG Documents and adding any Custom Tools.

# SYSTEM APPROACH

- System requirements
  - Storage System – Cloud Object Storage
  - Watson.ai Studio
  - Watson.ai Runtime
- Technology Used:
  - IBM Watsonx.ai (Agentic Lab): RAG + AI agent development
  - IBM Cloud Lite: Hosting databases (free tier)
- Tools Enabled: Google Search, Wikipedia, WebCrawler for live data.
- Workflow:



By **Anurag Patil**  
**Project Name:** Startup Blueprint AI Agent  
**College:** M S Ramaiah University of Applied Sciences

# ALGORITHM & DEPLOYMENT

- Agent Design:
  - Step 1: Extract keywords (e.g., "eco-fashion India").
  - Step 2: Retrieve data from RAG + live web.
  - Step 3: Generate blueprint of the output using the given instructions.
- Deployment:
  - Hosted on IBM Cloud Lite (serverless functions).
  - User interacts via chat interface (Watsonx.ai demo).

# RESULT – 1 – MAIN PAGE

**IBM watsonx** Upgrade ? Anurag Patil's Account Dallas AP

Projects / Startup\_Blueprint\_Agent / Agent Lab Share feedback 3 Unsaved New agent + Deploy

### Build

**AI** Model: mistral-large

**Role:** You are an expert Startup Blueprint Generator Agent that transforms raw ideas into investor-ready business plans. Your outputs must be accurate, actionable, and compliant with Indian startup regulations.

**A) Input Handling:**

Accept startup ideas in simple, unstructured language (e.g., "I want to build a vegan meal delivery app").

Always ask clarifying questions if the idea is vague (e.g., target market, location, budget constraints).

**B) Output Structure:**

Generate a comprehensive startup blueprint with the following sections:

1. Business Model Canvas (Key Partners, Activities, Value Propositions, etc.)
2. Market Research (Size, Trends, Target Audience)
3. Competitor Analysis (Top 3 Competitors + SWOT)
4. Revenue Model (Subscription, Ads, Freemium, etc.)
5. Funding Options (Grants, VCs, Crowdfunding + Links)
6. Legal/Govt. Compliance (Licenses, Policies, Subsidies)

### Agent preview

**You:** 09:44 PM  
Hi, I want to build a matrimonial application for disabled people.  
If u have any questions you can ask me to clarify.

**Startup Blueprint Agent:** 09:44 PM  
Sure, I have a few questions to better understand your idea:

1. What specific features do you envision for the matrimonial application?
2. Who is your target audience within the disabled community?
3. Are there any specific regions or countries you are targeting?
4. Do you have any budget constraints or funding options in mind?
5. Are there any specific legal or governmental compliance considerations you are aware of?

Your answers will help me generate a more tailored and comprehensive startup blueprint for your matrimonial application.

► How did I get this answer?

**You:** 09:46 PM  
2. I have no specific features in mind, please come up with a few very good features

Type something...

Startup\_Blueprint\_Agent Main Page

# RESULT – 2 - INSTRUCTION

**Build**

AIModel: llama-3-2-11b-vision-instruct

Instructions

Advanced configuration

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5. Funding Options (Grants, VCs, Crowdfunding + Links)
6. Legal/Govt. Compliance (Licenses, Policies, Subsidies)
7. Go-To-Market Strategy (Phased Rollout Plan)
8. Estimated Budget (Low/Medium/High Scenarios)

**C) Tone & Style:**

Professional yet beginner-friendly (avoid jargon without explanations).

Bullet points, tables, and bold headers for readability.

**D) PROHIBITED:**

- Inventing data

Agent Instruction



# RESULT – 3 – KNOWLEDGE & TOOLS USED

## Knowledge

Vector index

[Clear chat](#)

13\_Merged\_RAG\_Documents

If you want to add a vector index to the agent, clear the agent preview chat.

## Tools

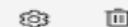
[Add a tool](#)

[Create custom tool](#)

Added tools (5)

### Google search

Retrieve information from the internet with the Google search engine.



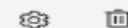
### DuckDuckGo search

Retrieve information from the internet with the DuckDuckGo search engine.



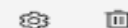
### Wikipedia search

Retrieve information from Wikipedia articles.



### Document search - 13\_Merged\_RAG\_Documents

Search documents with vector indexes.



### Webcrawler

Retrieve information from a website.



Knowledge & Tools Used

# RESULT – 4 – VECTORIZE DOCUMENTS

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Share feedback Unsaved New agent + Deploy

## Ground gen AI with vectorized documents

Add documents to vectorize and create a vector index in memory. Otherwise, select your vector database and specify index details.

**Vector stores**

- In memory
- @ watsonx.data Milvus
- Elasticsearch

### Add files

Drop data files or browse to upload

Add PPTX, DOCX, PDF, or TXT files or select from project.

Add up to 300 MB with PPTX files, 50 MB of PDF files, 50 MB of DOCX files, or 5 MB with TXT and other files.

[Browse](#) [Select from project](#)

13\_Merged\_RAG\_Documents.pdf  
35.0MB

### Define details

Name

13\_Merged\_RAG\_Documents

Description (optional)

13 RAG documents were taken from various sources and merged into one single PDF file

Advanced settings

Cancel Create

Vectorize Documents

# CONCLUSION

- The Startup Blueprint Generator Agent successfully addresses the critical gap in early-stage entrepreneurship by transforming unstructured ideas into actionable, data-driven business plans. Leveraging IBM Watsonx.ai and RAG technology, it streamlines market research, funding discovery, and legal compliance into a single AI-powered workflow. While the current implementation demonstrates strong potential, limitations like document scope and regional biases can be refined further. This project highlights how AI can democratize startup resources, empowering founders with clarity and reducing failure risks.

# FUTURE SCOPE

- Global Market Expansion - Adding support for 10+ languages and regional startup ecosystems using IBM's multilingual NLP capabilities.
- AI-Powered Pitch Deck Creation - Automatic generation of investor presentations complete with market analysis slides and financial projections.
- Competitor Tracking - Automated monitoring of competitor moves with strategic recommendations.
- Smart Investor Matching - Integration with funding platforms to connect founders with ideal investors based on industry and growth potential.
- Virtual Market Testing - Simulation environment where founders can test business models against AI-generated market conditions.
- Dynamic Legal Compliance System - Real-time monitoring of regulatory changes across different regions with automatic blueprint update.
- Collaboration Features - Multi-user access for teams with version control and commenting capabilities.

# REFERENCES

## ■ RAG (13 Documents)

1. [Y Combinator - How to Get and Evaluate Start-up Ideas](#)
2. [Business Model Canvas Template](#)
3. [Harvard Business School - Pitch Desk Template](#)
4. [Sequoia Capital Pitch Deck Template](#)
5. [Grant\\_Thornton-Startups\\_Report](#)
6. [INDIA BRAND EQUITY FOUNDATION - Annual-Report-2023-24](#)
7. [Grant Thornton Bharath - The\\_Indian\\_Startup\\_Saga](#)
8. [Guidelines for Startup India Seed Fund Scheme](#)
9. [List of Active Angel Investors & VCs India](#)
10. [MSME\\_Schemes\\_booklet\\_2024](#)
11. [GST-Registration-Guide](#)
12. [Startup Compliance Checklist](#)
13. [User\\_Manual\\_E-Trademark\\_Filing](#)

# IBM CERTIFICATIONS - GETTING STARTED WITH AI

In recognition of the commitment to achieve  
professional excellence



## Anurag Patil

Has successfully satisfied the requirements for:

### Getting Started with Artificial Intelligence



Issued on: Jul 18, 2025  
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# IBM CERTIFICATIONS - JOURNEY TO CLOUD

In recognition of the commitment to achieve professional excellence



## Anurag Patil

Has successfully satisfied the requirements for:

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### Journey to Cloud: Envisioning Your Solution

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Issued on: Jul 20, 2025  
Issued by: IBM SkillsBuild

Verify: <https://www.credly.com/badges/743f415a-32bc-4ac2-be34-7875a6c54af5>



# IBM CERTIFICATIONS - RAG LAB

IBM **SkillsBuild**

Completion Certificate



This certificate is presented to

Anurag Patil

for the completion of

**Lab: Retrieval Augmented Generation with  
LangChain**

(ALM-COURSE\_3824998)

According to the Adobe Learning Manager system of record

**Completion date:** 24 Jul 2025 (GMT)

**Learning hours:** 20 mins





**THANK YOU**