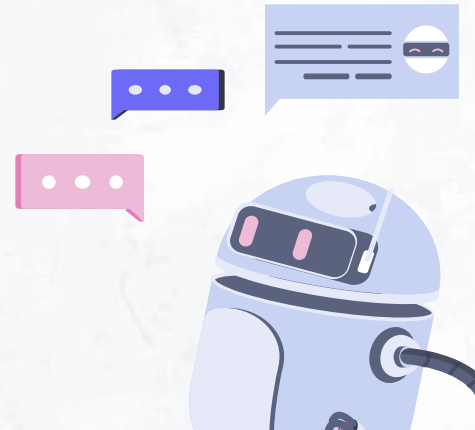**Team 11: DATRIX**

# BOT with Benefits

# 01

# Problem Statement

Government welfare schemes exist to support citizens, but a large portion of the population remains unaware of their benefits. This information gap prevents people from accessing vital support in areas like health, education, housing, income etc.

**Problems:**

- Information about schemes is scattered across complex government websites.

- Lack of localized and simplified content makes it hard to understand.

- Limited digital literacy and access to support tools restrict usage.

| Sl. No. | Government Schemes | Aware | Not Aware |
|---------|-------------------|-------|-----------|
| 1 | Deen Dayal Upadhyaya Grameen Kaushalya Yojana | 126 (52.94%) | 112 (47.06%) |
| 2 | Pradhan Mantri Gramin Awaas Yojana | 184 (77.31%) | 54 (22.69%) |
| 3 | Remunerative Approach for Agriculture and Allied sector Rejuvenation | 166 (69.75%) | 72 (30.25%) |
| 4 | Sampoorna Grameen Rozgar Yojana | 149 (62.61%) | 89 (37.39%) |
| 5 | Pradhan Mantri Gram Sadak Yojana | 172 (72.27%) | 66 (27.73%) |
| 6 | Pradhan Mantri Adarsh Gram Yojana | 201 (84.45%) | 37 (15.55%) |
| 7 | National Rural Livelihood Mission | 188 (78.99%) | 50 (21.01%) |

*(A Study on Awareness of Central Government Schemes for the Sustainable Development of Rural India with Reference to Coimbatore)*
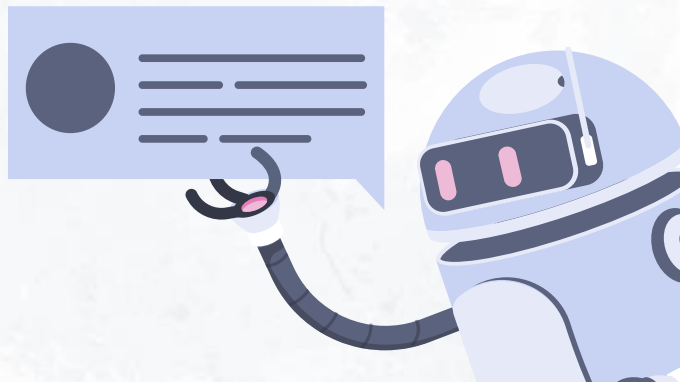
**02**

Solution

To bridge this information gap and ensure citizens can access we tried building a smart and inclusive solution.

**Solutions:**

- Develop an intelligent AI bot to help users easily discover schemes they are eligible for.

- Offer a user-friendly interface with localized and simplified support.

- Ensure accessibility for all, including those with limited digital skills.
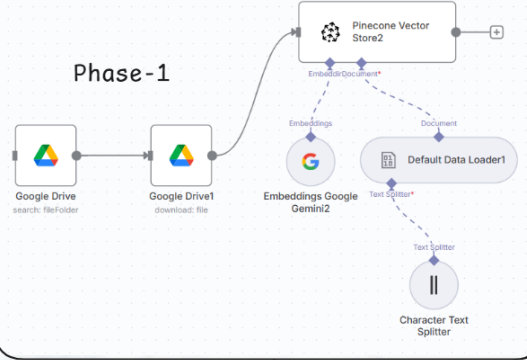
# 03

# Model Architecture

# Data Extraction

```
URLs collection          Data extraction from        Unstructured data          Data Processing
through web scraping              URLs
```
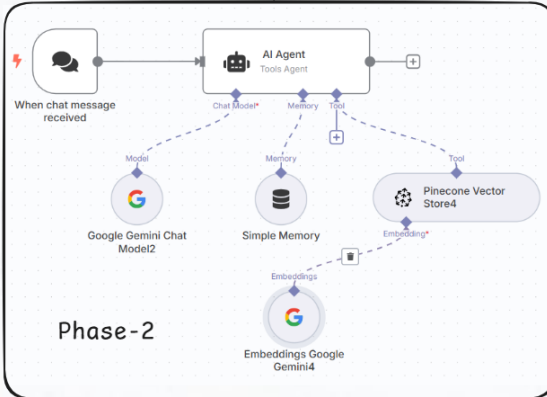
## Phase-1



Google Drive
search: fileFolder

Google Drive1
download: file

Pinecone Vector Store2

Embeddings Google Gemini2

Default Data Loader1

Character Text Splitter

## Phase-2



When chat message received

AI Agent
Tools Agent

Google Gemini Chat Model2

Simple Memory

Pinecone Vector Store4

Embeddings Google Gemini4

## Data Extraction

URLs collection through web scraping → Data extraction from URLs → Unstructured data → Data Processing

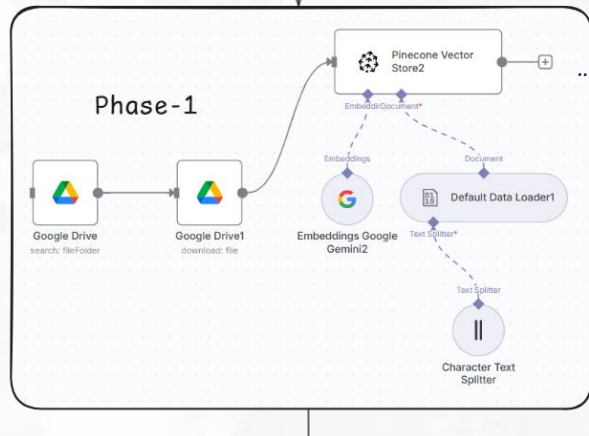| | Link |
|---|---|
| 1 | Link |
| 2 | https://www.myscheme.gov.in/schemes/fadsp1012e |
| 3 | https://www.myscheme.gov.in/schemes/icmr-pdf |
| 4 | https://www.myscheme.gov.in/schemes/tkgthe |
| 5 | https://www.myscheme.gov.in/schemes/skerala |
| 6 | https://www.myscheme.gov.in/schemes/sgassobcaniphsaislecxixii |

Title: Financial Assistance To Disabled Students Pursuing (10th, 11th, 12th Equivalent Exams)

URL Source: https://www.myscheme.gov.in/schemes/fadsp1012e

Markdown Content:
### Check Eligibility

### Kerala

```
{
"url": "https://www.myscheme.gov.in/schemes/ddanwrasi",
"scheme_name": "Dr. Dharmambal Ammaiyar Ninaivu Widow Remarriage Assistance Scheme-I",
"State": "Tamil Nadu",
"details": "The \"Dr. Dharmambal Ammaiyar Ninaivu Widow Remarriage Assistance Scheme\" was launched by the Social W
"benefits": [
  "Financial Assistance of \u20b9 25,000/-.",
  "One sovereign (8gm) 22-carat gold coin for making Thirumangalyam."
],
"eligibility": [
  "The applicant should be a widow.",
  "The bride (widow) should be 20 years or above in age.",
  "The bridegroom should be less than 40 years or above in age."
```

Phase-1

Google Drive
search: fileFolder

Google Drive1
download: file

Pinecone Vector Store2

Embeddings Google Gemini2

Default Data Loader1

Character Text Splitter

Text Splitter

{
"url": "https://www.myscheme.gov.in/schemes/soapttikaa",
"scheme_name": "Scheme of Awarding Porkizhi",
"State": "Tamil Nadu",
"details": "The artists who have already received the Kalaimamani Award",
"benefits": "Financial Assistance of 15,000/-",
"eligibility": [
"The applicant should be an artist."
],
"application_process": [
"The advertisement from the Manram is published in the newspapers."
],
"documents_required": [
"Age Proof/Certificate.",
"_____"
]
}

Chunk 1:
Scheme: Scheme of Awarding Porkizhi to the Indigent Kalaimamani Awardee Artists
State: Tamil Nadu
Details: The artists who have already received the Kalaimamani Award
Benefits: Financial Assistance of 15,000/-.

Chunk 2:
Eligibility: The applicant should be an artist.
Application Process: The advertisement from the Manram is published in the newspapers.
Documents Required: Age Proof/Certificate, _____

{
"chunk": "Scheme: Scheme of Awarding ..................",
"embedding": [
-0.0123, 0.0345, 0.0567, -0.0789, 0.0210, ...
]
}

Showing 10 hits

**1**

SCORE
0.0309

**ID:** 85068656-dd8d-4f3c-af59-ba67901489bb
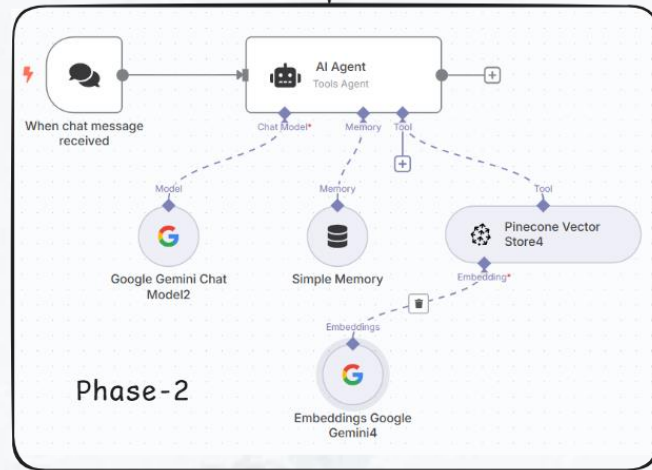**blobType:** "text/plain"
**loc.lines.from:** 1
**loc.lines.to:** 37
**source:** "blob"
**text:** "url: https://www.myscheme.gov.in/schemes/dan\r\nscheme_name: Delhi Arogya Nidhi\r\nState: Delhi\r\ndetails: The \"Delhi Arogya Nidhi (DA...

Phase-2

When chat message received

AI Agent
Tools Agent

Chat Model*   Memory   Tool

Model — Google Gemini Chat Model2

Memory — Simple Memory

Tool — Pinecone Vector Store4

Embedding*

Embeddings — Embeddings Google Gemini4

---

My workflow 2    + Add tag                                    Inactive      Share    Save

Editor    Executions

Chat    Session 0e5c90306dc2446e8ed32b436d13a214

What is your marital status? (Married, Never Married, Divorced, Separated, Widowed)

unmarried

What is your occupation?

student

What is your caste category? (General, OBC, SC, ST)

sc

Based on your details, you're eligible for:

Scheme Of Coaching & Allied For Scheduled Castes – The scheme aims to provide support for the betterment of Scheduled Caste (SC) candidates for coaching and pre-examination training in quality coaching institutions to enable them to appear in competitive examinations. Scheme for Promoting Young Talents in Science–II – The scheme "Scheme for Promoting Young Talents in Science–II (SPYTiS–II) is constituted for the purpose of providing

Type a message, or press 'up' arrow for previous one

Latest Logs from AI Agent node

AI Agent
  Simple Memory
  Google Gemini Chat Model2
  Simple Memory

Simple Memory
1ms | Started at 6:24:16 am |

Input

{
    "action": "loadMemoryVariables",
    "values": {
        "input": "sc",
        "system_message": "You are a professional Benefits Assistant designed to help users discover and understand government schemes. Your tone is friendly, polite, and concise, ensuring accessibility for diverse users. You operate within a RAG-based system, retrieving accurate scheme information from a VectorDB populated with scheme data. Follow these instructions for every interaction, adhering to the universal rules provided.\n\nUniversal Rules\n\n\n\nInput Validation:\n\n\n\nValidate all user inputs to ensure they are clear, complete, and relevant (e.g., age as a number, gender as Male/Female/Other)\n\n\n\nIf an input is vague

# System Prompt

- Role description

- Universal Rules

- Task Selection

- Task instructions

- General Guidelines

**04**

# Demo of the Deployment

https://bit.ly/datrixx

**05**

Limitations and Further Improvements

- **Advanced Metadata Filtering :** Include granular filters such as  state, age, gender, socio-economic status, occupation, etc to refine scheme matches more accurately.

- **Add More Data & Expand Scheme Coverage  :**Integrate a comprehensive set of schemes from **central, state, and local governments**, including ministry-specific and sector-focused programs.

- **Enhance System Prompt Design :** Use more context-rich system prompts that guide the AI to behave consistently, handle ambiguous queries gracefully, and adapt to multilingual or incomplete inputs

06

Future Scope

- Updating Vector Database with Latest Scheme Data

- Scheme Validity Alerts and Updates for User

- Multilingual Converter Agent

# Thank you!

Team : 11

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