

AI for Bharat Hackathon

Powered by **aws**



Team Name : Pro_Nakn

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Problem Statement : AI for Learning and Developer Productivity

Brief about the Idea:

Project Name: MindStack

One-Line Pitch: An AI-powered "Second Brain" that automatically captures, organizes, and retrieves your learning journey—whether you're debugging code, watching a tutorial, or reading a research paper.

The Concept: Humans forget ~70% of new information within 24 hours.

MindStack acts as a passive background layer that indexes your "learning moments" (code fixes, video tutorials, article highlights) and makes them instantly searchable, turning scattered information into permanent knowledge.

How different is it?

- **Universal Ingestion:** It doesn't just look at code. It ingests **YouTube summaries**, **PDF highlights**, **Blog posts**, and **VS Code diffs**.
- **Context-Aware Recall:** Unlike generic AI (ChatGPT) which gives general answers, MindStack answers based on *what you have actually learned and saved* in the past.

How will it solve the problem?

- It eliminates the need to "re-learn" the same concept twice. If a student learned a specific math formula or a developer fixed a bug 6 months ago, the system retrieves that exact context instantly.

USP (Unique Selling Proposition)

- **Multi-Modal Learning:** Supports Video (YouTube), Text (Web/PDF), and Code (IDE).
- **Passive "Study Buddy":** No manual data entry required; it works in the background while you learn.
- **Privacy-First:** Your personal knowledge base remains private to you.

List of Features

The Knowledge Clipper (Browser Extension)

- *For Learners:* Summarize and save YouTube tutorials or articles with one click.
- *For Devs:* Save code solutions and documentation snippets.

IDE Integration (VS Code)

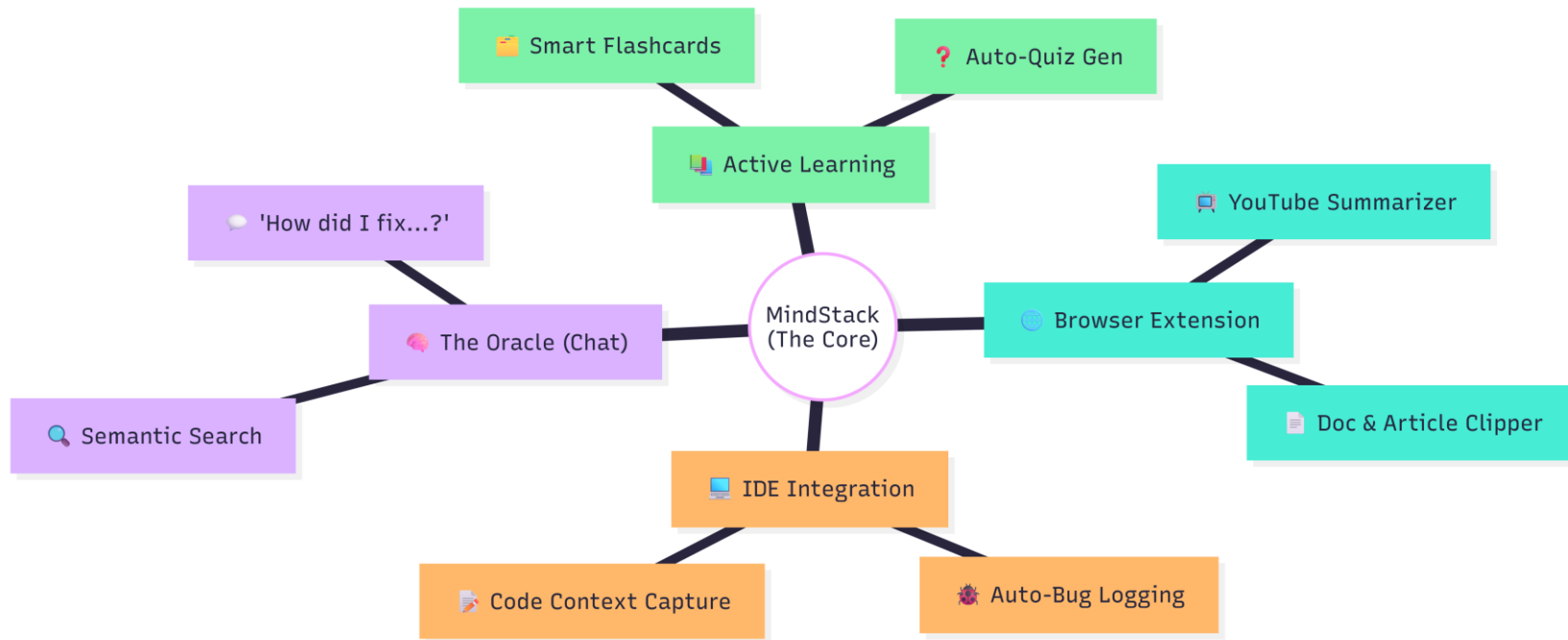
- Automatically captures code patterns, bug fixes, and successful compiles.

The Recall Chatbot

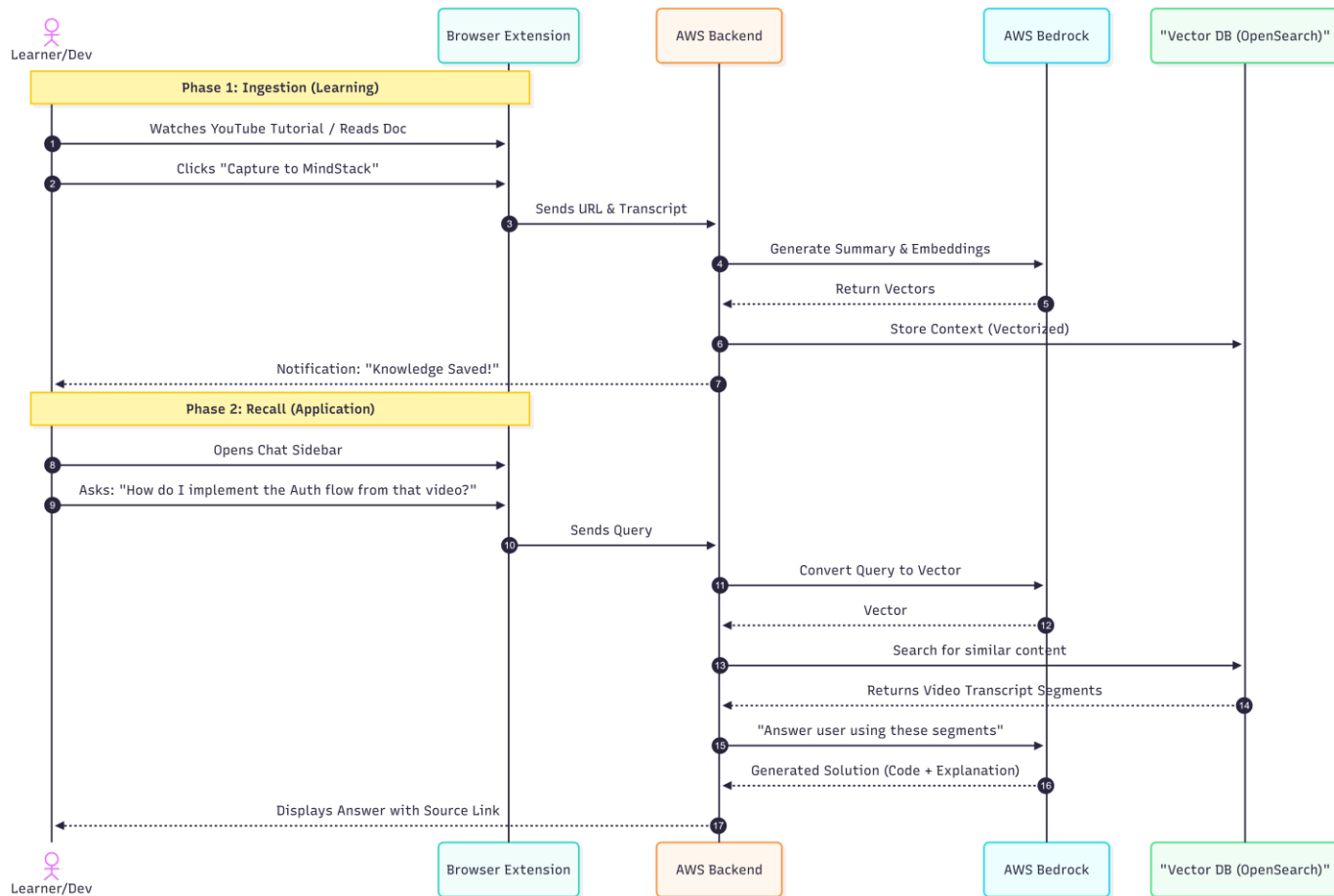
- A conversational interface where you can ask: *"What was that library I used for charts last month?"* or *"Summarize my notes on Thermodynamics."*

Smart Flashcards

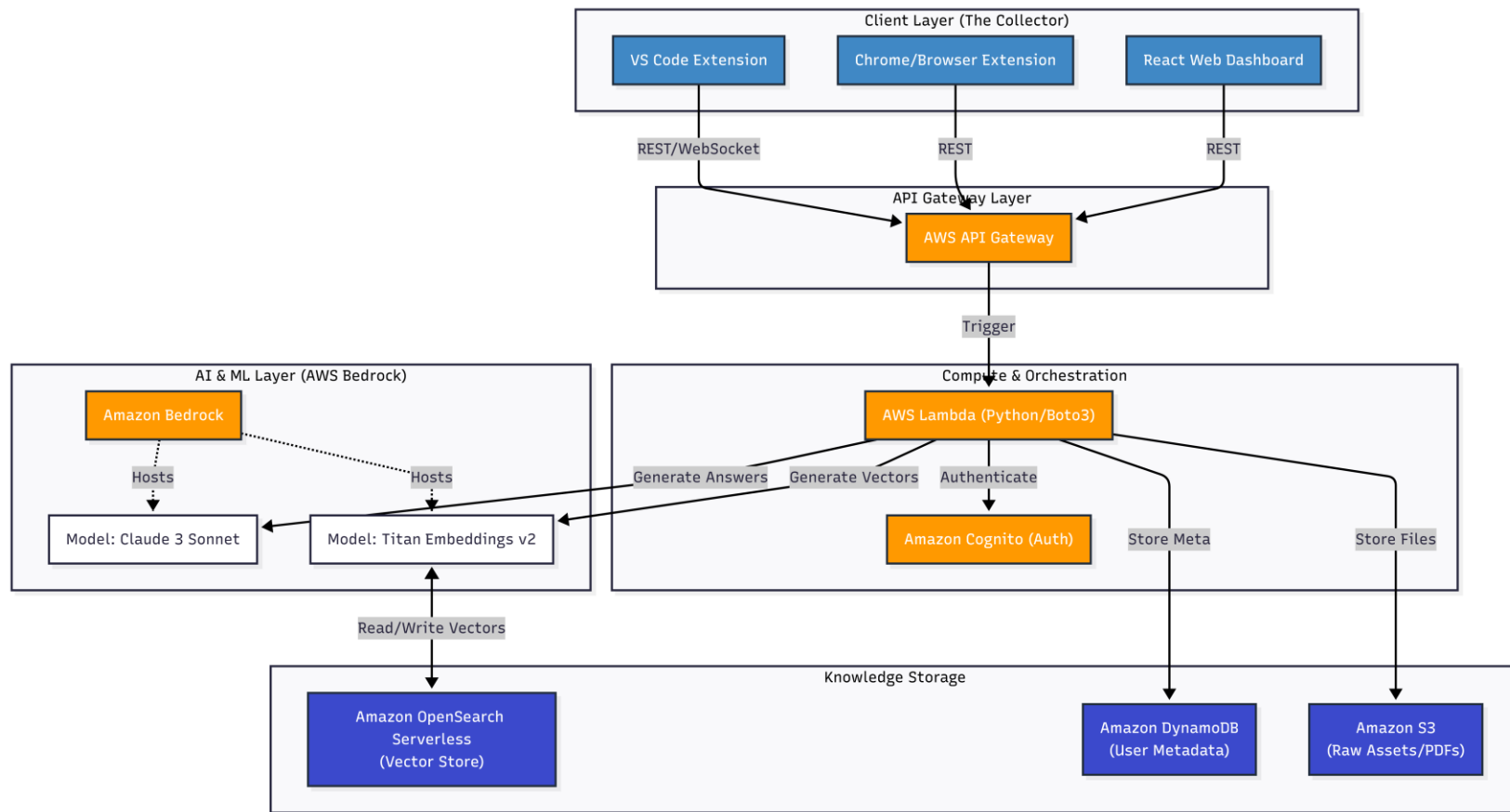
- Automatically generates quiz questions from your saved content to help you revise.



Use Case diagram



Architecture diagram



Technologies to be used in the solution

AWS Services: Bedrock, Lambda, OpenSearch, API Gateway, S3.

AI Models: Claude 3 Sonnet, Amazon Titan.

Frontend Frameworks: React, Tailwind CSS.

Development: Python (Boto3), TypeScript.

Estimated implementation cost

Prototype: Free (AWS Free Tier).

Scale: Cost-effective due to Serverless architecture.

- **Bedrock:** Pay-per-token (input/output).
- **OpenSearch:** Pay for storage/compute.
- **Est:** <\$5/user/month for heavy usage.

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Thank You

