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AI for Bharat Hackathon

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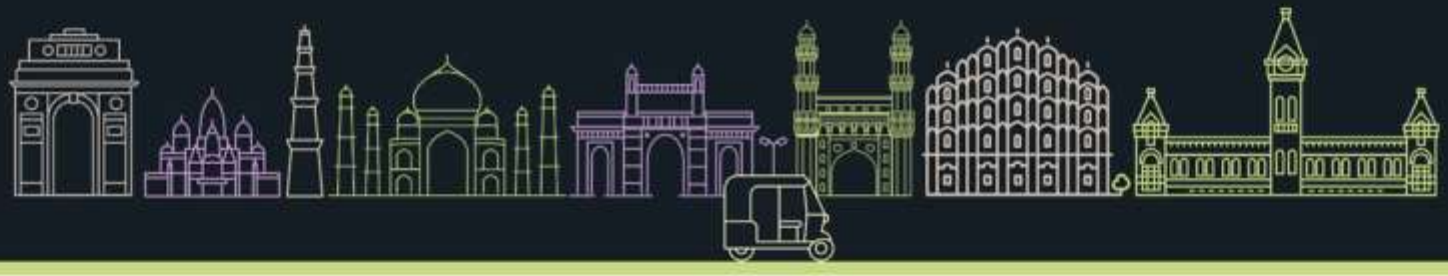


Team Name : Knox

Team Leader Name : Aryan Pagaria

Problem Statement : AI for Communities , Access and Public impact

Brief about the Idea:

This project proposes an AI-powered career and skill guidance web platform designed to help learners in India navigate complex skill paths and become job-ready efficiently.

Users specify what they want to become (e.g., Machine Learning Engineer, Backend Developer, Data Analyst).

The system uses Large Language Models (LLMs) such as Gemini to generate **a dynamic, micro-level learning roadmap**, breaking the skill into the smallest possible topics and sequencing them logically based on prerequisites and industry relevance. For every topic, the platform intelligently recommends:

- Free learning resources (YouTube, PDFs)
- Books
- Premium courses
- Research papers and advanced material

Premium tiers further provide **project guidance** and **job matching**, enabling a complete journey from learning to employment. The solution directly addresses India's large learner base by focusing on **accessibility, clarity, and employability**, making it highly suitable for the **AI for Bharat** vision.

• How different is it from any of the other existing ideas? :

Most existing platforms rely on:
• Static roadmaps
• Pre-recorded courses
• Rule-based content categorization

Our solution is fundamentally different because it uses AI for reasoning, planning, and adaptation, not just content delivery.

Key Differences
• Roadmaps are **AI-generated in real time**, not pre-written
• Topics are broken into **micro-learning units**, not broad modules
• Resources are **context-aware**, not manually tagged

Learning paths adapt to:
•User goals
• Skill level
• Job market trends
This makes the platform outcome-driven and personalized, rather than generic and content-heavy.

- **How will it be able to solve the problem?**

  - AI understands career goals entered in natural language and generates a personalized, structured roadmap
  - Micro-level topic breakdown removes confusion and learning gaps
  - AI-curated resources reduce information overload and save time
  - Project-based guidance converts learning into real, job-ready skills
  - Skill-to-job matching connects users with relevant real-time job opportunities
  - Accessible and scalable design ensures impact across Bharat

- **USP of the Proposed Solution**

  - AI-powered micro-level career roadmaps, not static or generic learning paths
  - End-to-end journey from learning → projects → jobs in one platform
  - Context-aware resource curation instead of random content listing
  - Project guidance aligned with real job requirements, improving employability
  - Real-time skill-based job matching and alerts
  - Accessible, scalable, and Bharat-focused design (low-cost, multilingual, inclusive)

List of features offered by the solution

AI-Based Career Goal Understanding:

Users enter goals in natural language; AI interprets intent and skill requirements.
Personalized Micro-Level Roadmaps

Step-by-step learning paths broken into the smallest topics with logical progression.
Intelligent Resource Curation

Topic-wise recommendations of:

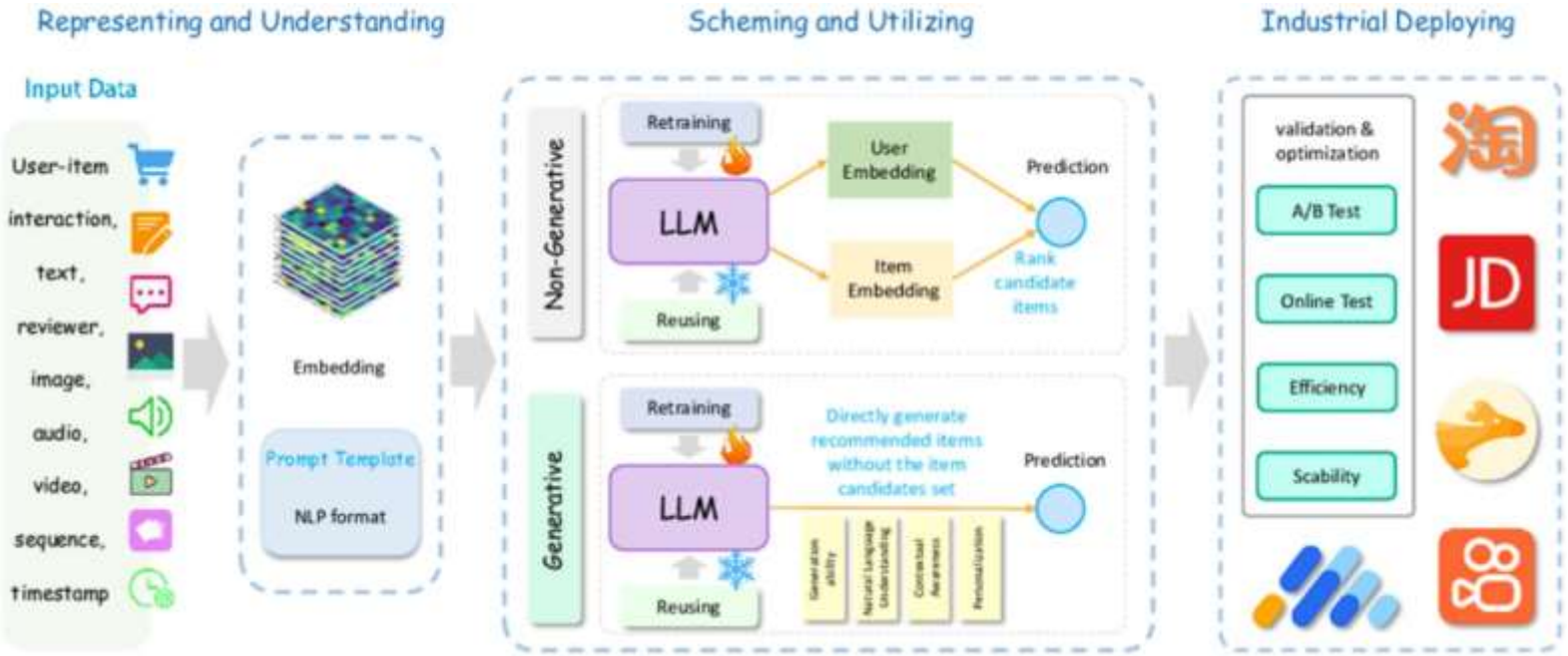
Free YouTube videos
Open PDFs & articles
Books
Premium courses
Research papers

Project-Based Skill Development (Premium)
Industry-relevant project ideas with structured guidance.

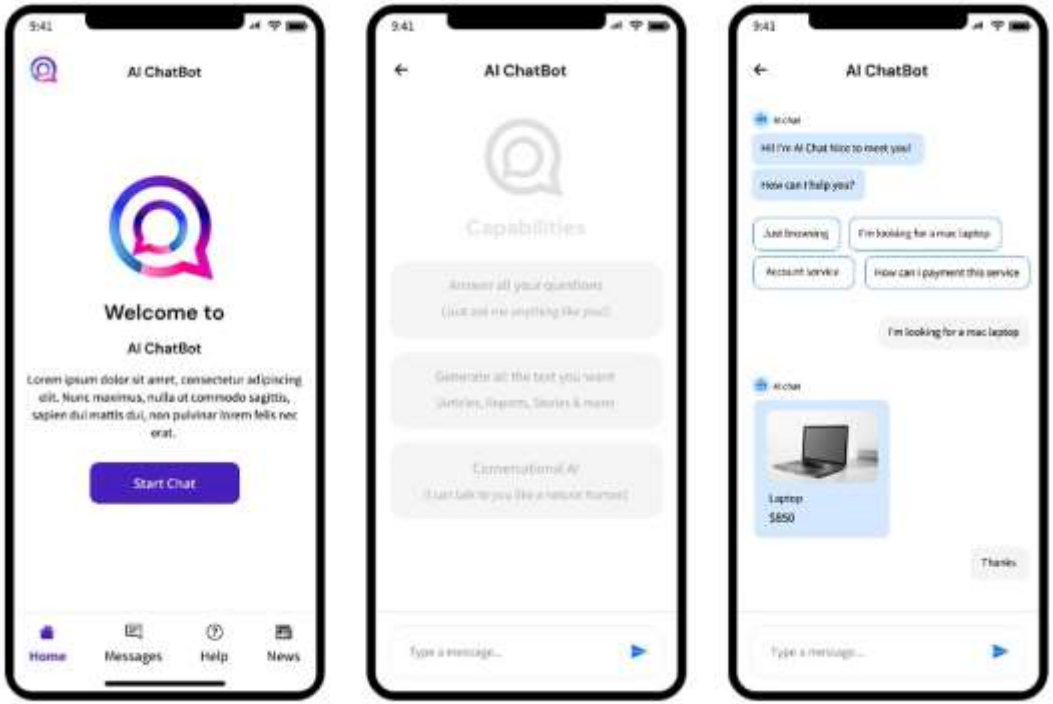
Skill-to-Job Matching
AI maps learned skills and projects to suitable job roles.

Real-Time Job Alerts
Notifications for jobs aligned with user readiness and skills.

Process flow diagram or Use-case diagram



Architecture diagram of the proposed solution:



Technologies to be used in the solution:

1. Artificial Intelligence & ML (Core):

Large Language Models (Gemini / equivalent)
Used for career understanding, micro-level roadmap generation, and contextual guidance
AI Recommendation Systems

2. Backend & Data Layer:

Backend Framework: FastAPI / Node.js
Databases: PostgreSQL / MongoDB (users, roadmaps, resources)
Job Data Integration: APIs / scraping pipelines for real-time job listings

3. Frontend & User Experience

Frontend Framework: React / Next.js
UI Features: Roadmap visualization, progress tracking, job alerts
Mobile-First & Low-Bandwidth Design (Bharat-focused accessibility)

4. Cloud, Security & Deployment
Cloud Platform: GCP / AWS / Azure (India region preferred)
Notifications: Email / in-app alerts
Payments (Premium): Razorpay / Stripe

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Thank You