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# Pragati

## AI for Impact Hackathon

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Team Name : WIZHOLICS

Team Leader Name : SHIVAM KHODE

Which domain does your idea address? (Agriculture / Healthcare / Skilling / Education):  
HEALTHCARE

What is the problem you are solving? (50 words max)

Many people struggle to find suitable health policies due to a lack of awareness and complex eligibility criteria. This project develops an AI-powered web app that recommends personalized health policies based on health and financial status. It offers details on eligibility, benefits, and applications, with multilingual support and an interactive chatbot.



Describe your solution. How different is it from any of the other existing ideas? How will it be able to solve the problem? USP of the proposed solution? What is the intended impact of your solution (max 350 words).

**Solution:** An AI-driven web app that recommends personalized health policies based on user health and financial status. It integrates both **government and private schemes**, provides **multilingual support**, and features an **interactive chatbot** for easy access.

#### Key Differentiators

- **Unified platform** for government & private health policies.
- **AI-based recommendations** instead of manual searches.
- **Automatic eligibility checks** to simplify selection.
- **Chatbot assistance** for quick support.
- **Regional language support** for wider accessibility.

#### Unique Selling Proposition (USP)

- **AI-powered personalized recommendations.**
- **Single platform** for all health policies.
- **Instant chatbot support** for queries.
- **Step-by-step application assistance.**

#### Intended Impact

- **Increases awareness** of available health schemes.
- **Boosts policy adoption** through simplified processes.
- **Improves accessibility** for lower-income groups.
- **Enhances India's overall health insurance coverage.**

Who is the primary user of your solution, and explain how your solution will leverage open-source AI to address the aspects mentioned in the [Key Design Guidelines](#) (max 200 words).

### Primary Users

- Individuals seeking health policies.
- Insurance providers & government agencies to reach the right audience.



### How Open-Source AI Helps

- **Personalized Suggestions** – AI recommends policies based on health & financial status.
- **Easy Access** – Multilingual support with AI-driven chatbot.
- **Clear & Transparent** – AI explains why a policy is recommended.
- **Scalable & Efficient** – Easily adds new policies & checks eligibility in real time.
- **Secure & Private** – Protects user data with AI privacy techniques.
- **User-Friendly** – Simple interface for all users.

How is this solution scalable? (100 words max)

The solution is highly scalable due to its modular architecture. It can integrate with new government schemes and private insurance policies. With cloud-based deployment, the system can handle high traffic efficiently.

The chatbot and recommendation system learn from different datasets, so they can quickly adapt to new health policies. Multilingual AI models make it accessible to people in different regions and languages. The system improves over time with user feedback and updated data. Since we use open-source tools, the cost is low, making it easy for NGOs and policymakers to use.

## List of features offered by the solution

It is always better to add a few visual representations (drawings/sketches/illustrations etc.) to your presentation, it adds to the power through which it reaches the audience.



### AI-Powered Policy Recommendation

Suggests policies based on health s financial status



### Eligibility Checker

Auto-verifies user eligibility for different policies



### Application Assistance

Step-by-step process for policy enrollment



### Community Support & FAQs

Educates users on benefits&procedures



### Interactive Chatbot

Provides real-time guidance in multiple languages



### User Dashboard

Tracks recommended policies & application status



### Data Security & Privacy

Ensures compliance with healthcare data regulations



### Automated Claim Assistance

Guide users in filing claims via step-by step help

What open-source AI tools and technologies will you use to design the solution? (Please list all.)

### 1. AI & Machine Learning

TensorFlow / PyTorch – For building AI models to recommend health schemes.

scikit-learn – For implementing classification and recommendation algorithms.

Hugging Face Transformers – For natural language processing (NLP) in a chatbot.

FastText – For text classification and multilingual support.

### 2. NLP & Chatbot

Rasa – Open-source chatbot framework for guiding users.

spaCy / NLTK – For text processing and extracting relevant details.

### 3. Database & Backend

MongoDB / PostgreSQL – To store user data and scheme information.

Express.js (Node.js) – For the backend API.

### 4. Frontend Development

React.js – For building a responsive web UI.

Tailwind CSS / Bootstrap – For styling and better UX.

### 5. API & Data Integration

Google Translate API / Tesseract OCR – For multilingual support.

Open Government Data (OGD) APIs – To fetch government health schemes.

Why are these open-source technologies the most appropriate for your solution?

1. **Cost-Effective & Flexible** – Open-source tools reduce cost and allow customization.
2. **Smart Recommendations** – TensorFlow, PyTorch, scikit-learn for personalized policy matching.
3. **Real-Time Chatbot** – Rasa & Hugging Face for responsive, intelligent conversations.
4. **Efficient Backend** – Express.js or Django for fast API handling and secure auth.
5. **Reliable Data Storage** – MongoDB for user data, PostgreSQL for structured policies.
6. **Smooth UI/UX** – React.js + Tailwind CSS for a modern, responsive interface.
7. **Multilingual Support** – Google Translate API for diverse language access.
8. **Live Policy Data** – Government API integration keeps info current.
9. **Scalable & Stable** – Docker + Kubernetes for deployment and scaling.



Describe the Solutions Architecture (500 words)

#### 1. Frontend (UI Layer):

- Tech: React.js (Next.js), Tailwind CSS
- Features: Dashboard, Multilingual (Google Translate API), Rasa Chatbot, PWA

#### 2. Backend (App Layer):

- Tech: Node.js (Express.js, RESTful APIs)
- Features: JWT Auth, Data Processing API, Policy Retrieval API

#### 3. Database Layer:

- MongoDB (User Data), PostgreSQL (Policy Data), Redis (Caching)

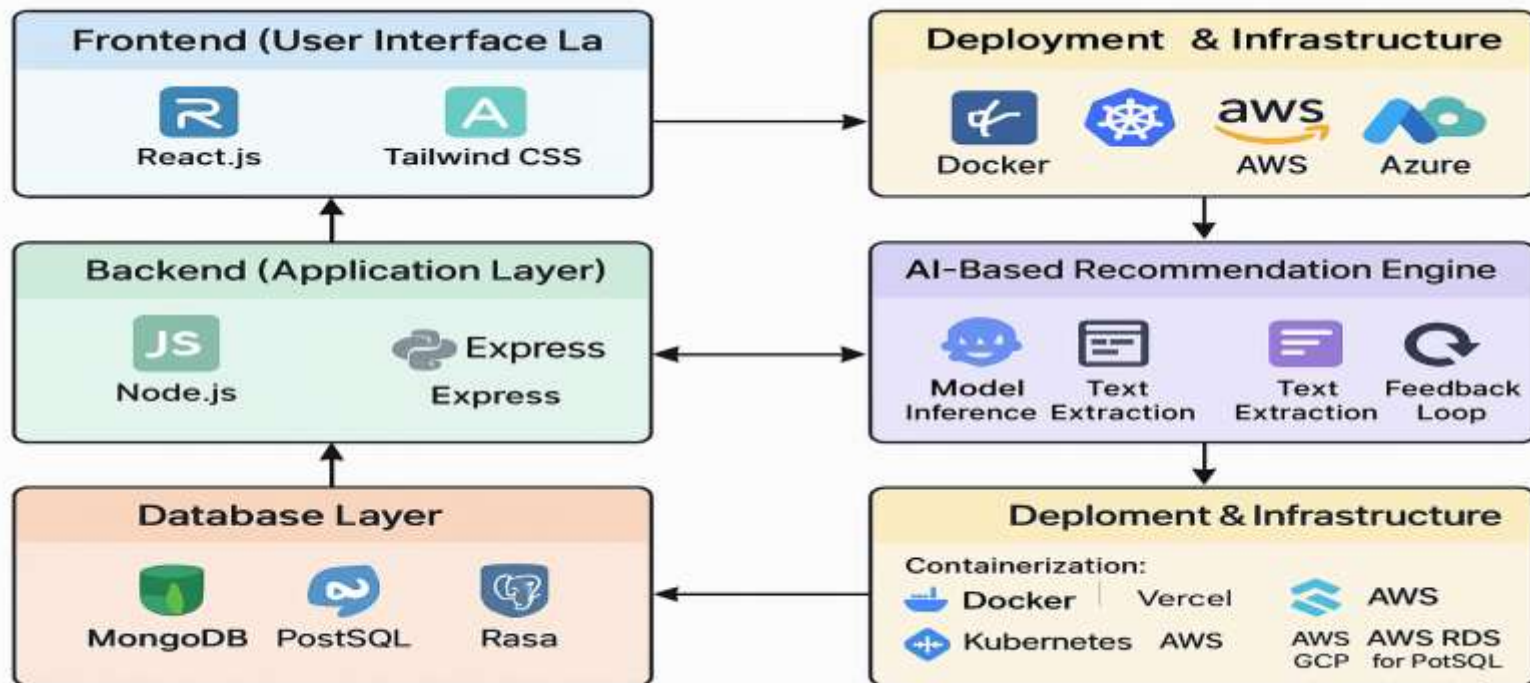
#### 4. AI Recommendation Engine:

- Tech: TensorFlow/PyTorch, scikit-learn
- NLP: spaCy, Hugging Face Transformers
- Chatbot: Rasa
- Deployment: FastAPI

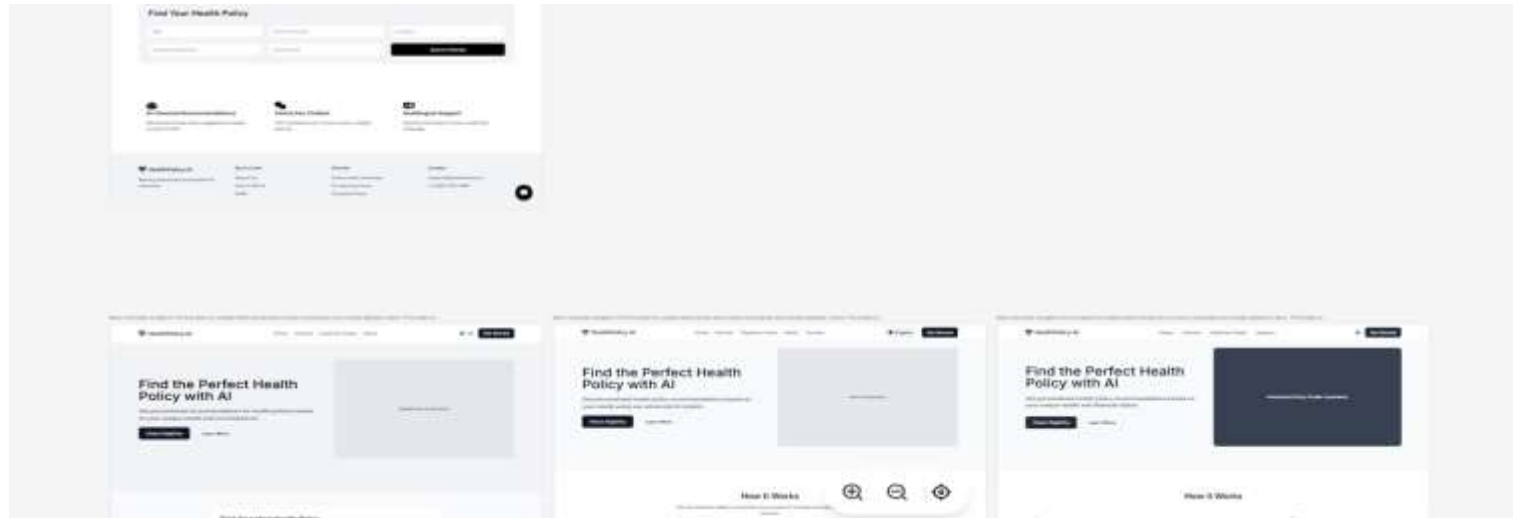
#### 5. Deployment & Infra:

- Containerization: Docker
- Orchestration: Kubernetes
- CI/CD: GitHub Actions
- Hosting: Vercel/Netlify (Frontend), AWS/GCP/Azure (Backend/AI), MongoDB Atlas & AWS RDS

Provide a high-level architecture diagram or a use-case diagram of your proposed solution



Please share the wireframes/Mock diagrams of the proposed solution (optional)



<https://uxpilot.ai/s/84812b67d2cf9511280bc496b032c68f>

What datasets will your solution use? Are they publicly available, synthetic, or user-generated?

1. Government Health Schemes (*Publicly available*) – From OGD, National Health Portal, Ayushman Bharat.
2. Private Health Policies (*Public & Web-scraped*) – From IRDAI and insurance providers.
3. User Health & Financial Data (*User-generated*) – Collected via forms, secured with encryption.
4. Synthetic Data (*AI-generated*) – Used to train the chatbot for better accuracy.

Does your solution require cloud-based computation, or can it work with on-device processing? If cloud-based, how do you plan to address connectivity challenges and cost constraints?

**Cloud-Based (Preferred)**

- AI-driven recommendations & real-time policy updates.
- Scalable chatbot & centralized data storage.

**Addressing Connectivity & Cost**

- Offline Mode: Caches key policy data.
- Edge Computing: Basic queries processed on-device.
- Serverless Computing: AWS Lambda/GCP Functions for cost efficiency.
- Free-tier & Grants: Uses government cloud programs & open-source tools.



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# THANK YOU