



CODECELL-GMPN,VESIT

# SYRUS HACKATHON 2025

Category Code: C4

Problem Statement Title : AI Powered Dynamic Insurance Pricing System

Team Name: CtrlCV

Institute Name: Vivekanand Education Society's Institute of Technology



# Idea / Approach details (& implemented features)

## Dynamic Insurance Pricing – Reward-Based System

- ◆ **AI-Based premium adjustments** based on health & risk score
- ◆ **Risk Score Factors:** Age, lifestyle, income source, residence, family size, disease history
- ◆ **Premium changes** within a range based on health checkups & risk score
- ◆ **Incentives for a healthy lifestyle:**
  - ◆ Monthly marathons & half-yearly health checkups
  - ◆ Fitbit integration (steps, calories, BMR, distance)
- ◆ **Advantages:** Encourages preventive health care, reduced claims, ensures equitable & individualized pricing

Stay healthy, pay less!



# Innovation (Showstopper)

## Unique Features of Our Project

- ◆ **AI-Driven Risk Score:** UPTIQ AI evaluates users' quality of life.
- ◆ **Dynamic Premiums:** Rewards healthy lifestyle choices with reduced premiums.
- ◆ **Fraud Detection:** AI verifies hospital reports to prevent false claims.
- ◆ **Health Incentives:** Encourages marathons and health checkups.
- ◆ **Real-Time Health Data:** Fitbit tracks calories, BMR and distance for risk scoring.

**Smarter Insurance, Healthier Lives!**



# Tech Stack


## Frontend Development

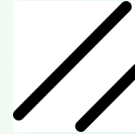
- Framework: ReactJS 
- Styling: Tailwind CSS 
- UI Components: ShadCN 
- State Management: Redux Toolkit
- File Uploads: Axios
- Virtual Assistant: Dialogflow/LangChain

## Testing Tools & ML Models

- API Testing : ThunderClient
- Machine learning : UPTIQ

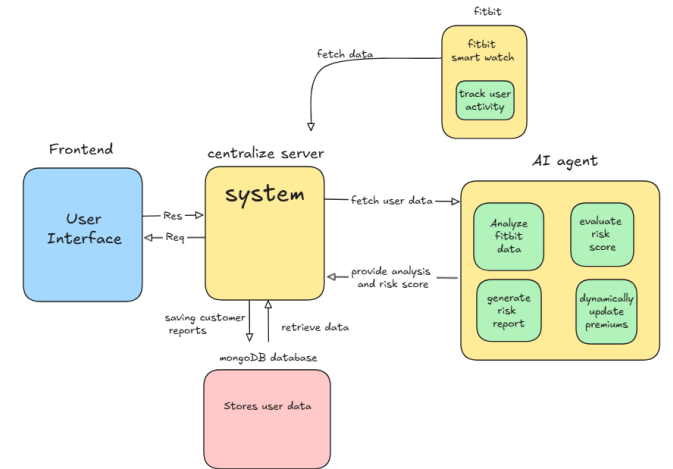
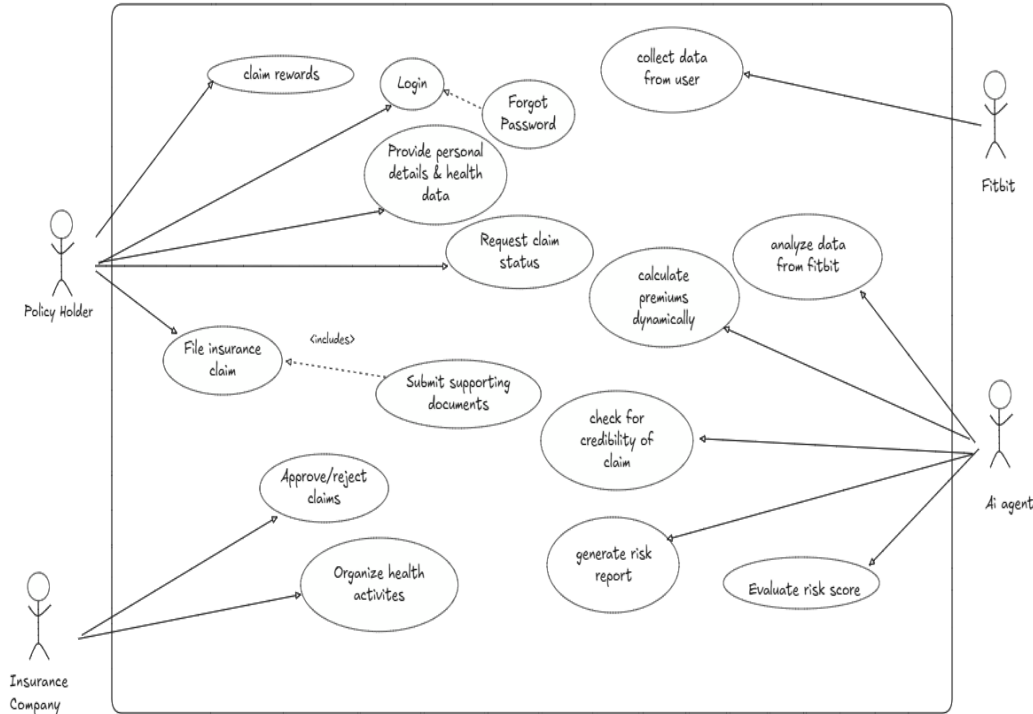
## Backend Development

- Framework: Node.js 
- API: Express.js
- Payments: Stripe/Razorpay



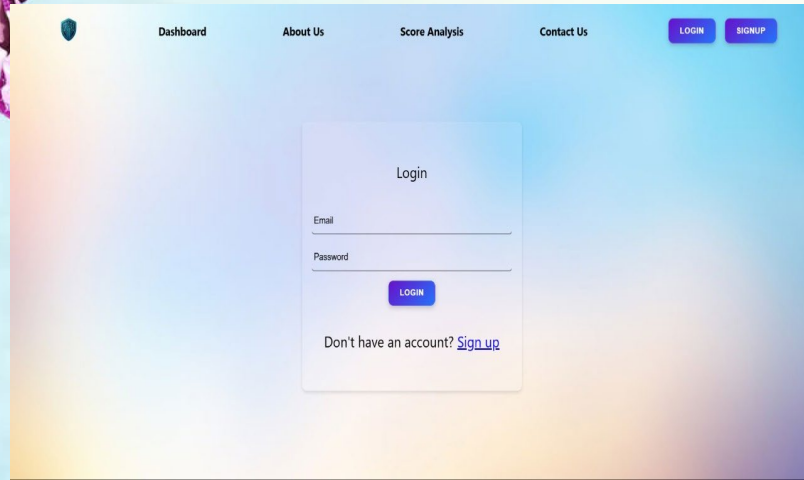
# Implementation/Prototype/Use Case Diagram

(screenshots)





# Implementation/Prototype/Use Case Diagram (screenshots)



Dashboard About Us Score Analysis Contact Us LOGIN SIGNUP

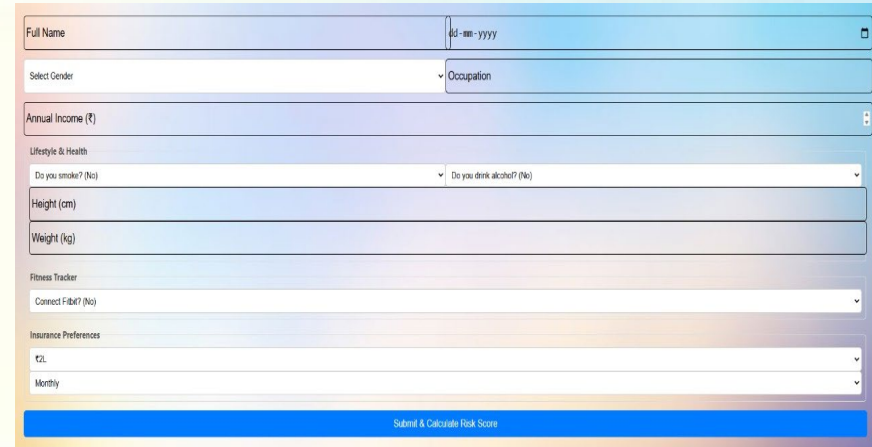
Login

Email

Password

LOGIN

Don't have an account? [Sign up](#)



Full Name 11-11-2024

Select Gender Occupation

Annual Income (₹)

Lifestyle & Health

Do you smoke? (No) Do you drink alcohol? (No)

Height (cm)

Weight (kg)

Fitness Tracker

Connect Fitbit? (No)

Insurance Preferences

₹L Monthly


Submit & Calculate Risk Score

Video Link of implementation:

<https://drive.google.com/file/d/1D5oXclqr5YY2iVYAhJI8D9pHbJtXG1ha/view?usp=sharing>



# In case of Uptiq category - Your Uptiq Agent (explain in detail)



- ◆ **Multi-Agent System:** UPTIQ consists of specialized sub-agents, each handling a critical aspect of insurance processing.

- ◆ **Sub-Agents & Their Roles:**

**Data Visualization Agent:** Generates risk reports.

**Health Incentives Agent:** Recommends personalized health activities.

**Fraud Detection Agent:** Identifies fraudulent claims.

**Premium Calculation Agent:** Determines premium pricing based on risk.

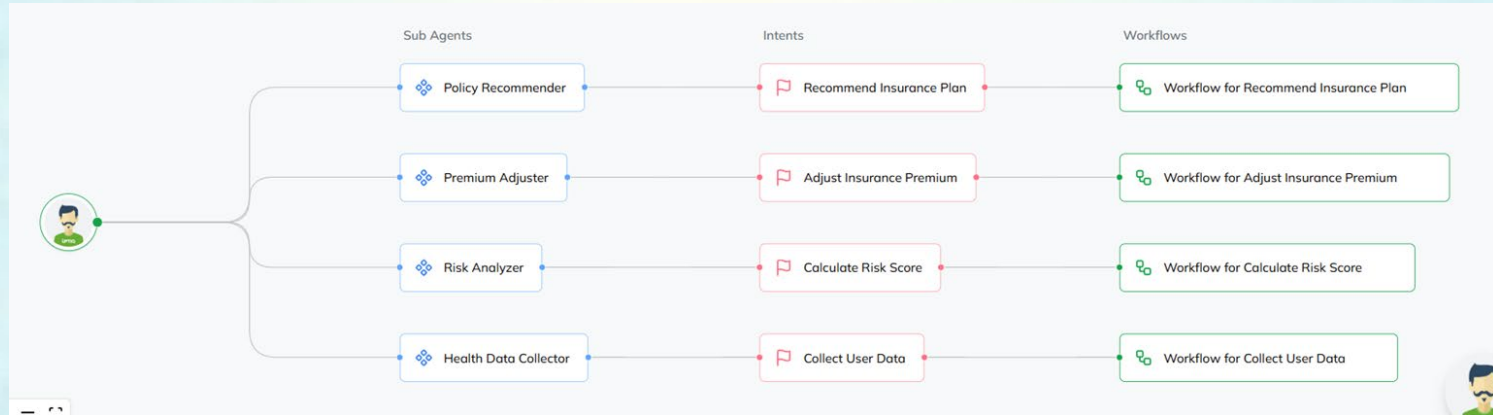
**Risk Analysis Agent:** Calculates and assigns health risk scores.

- ◆ **Workflow Automation:** Each intent is supported by predefined workflows to ensure efficiency and accuracy in risk assessment, fraud prevention, and premium calculation.



# In case of Uptiq category - Your Uptiq Agent (explain in detail)

## Uptiq Agent Dashboard




 **Policy Recommender**  
policy-recommender-9254

### Scope

Suggests suitable insurance plans based on the user's risk profile and health data.


### IC Model

 GPT 4o mini (Azure)

### Intents :

Recommend...


+ Add New Intent

 **Premium Adjuster**  
premium-adjuster-6968

### Scope

Dynamically calculates and adjusts the insurance premium based on the risk score and monthly health updates,...

### IC Model

 GPT 4o mini (Azure)

### Intents :

Adjust Insuranc...


+ Add New Intent

 **Risk Analyzer**  
risk-analyzer-4686

### Scope

Calculates a risk score based on collected health data, considering factors like age, BMI, smoking, exercise, and medical...

### IC Model

 GPT 4o mini (Azure)


### Intents :

Calculate Risk...

+ Add New Intent



# Future Objectives



◆ **AI-Powered predictive health alerts:** Based on the medical records history of an individual, a capable AI agent can predict possible diagnosis of diseases thus calculating risk score more accurately.

◆ **Integration with hospitals for real-time emergency alerts:** If a policyholder is admitted in case of an emergency then the hospital can immediately access patients medical history via blockchain smart contracts.

◆ **Blockchain for secure medical record storage:** Store data like hash of medical reports which will help with security and authentication.

**Expanding wearable integrations:** Integrating Apple watch and Samsung Health along with Fitbit to target more users.

