



CODECELL - CMPN, VESIT

SYRUS HACKATHON 2025

Category Code: C4

Problem Statement Title: InsurAI - Smarter Policies, Faster Claims, and Fraud Protection

Team Name: .env

Institute Name: Vivekanand Education Society's Institute of Technology



Idea / Approach details (& implemented features)

Approach:

- **Data-Driven Personalization**
Clustering (age/location/occupation) → Tailored policy recommendations.
- **Real-Time Parametric Triggers**
Integrate OpenWeather API → Adjust premiums based on cyclone/flood risks.
- **AI-Powered Claims & Fraud Detection**
NLP-based document analysis → Flag non-compliant/inflated claims.
- **Chatbot for Strategic Insights**
RAG-based Q&A on policy performance, risk profiling, and market trends.

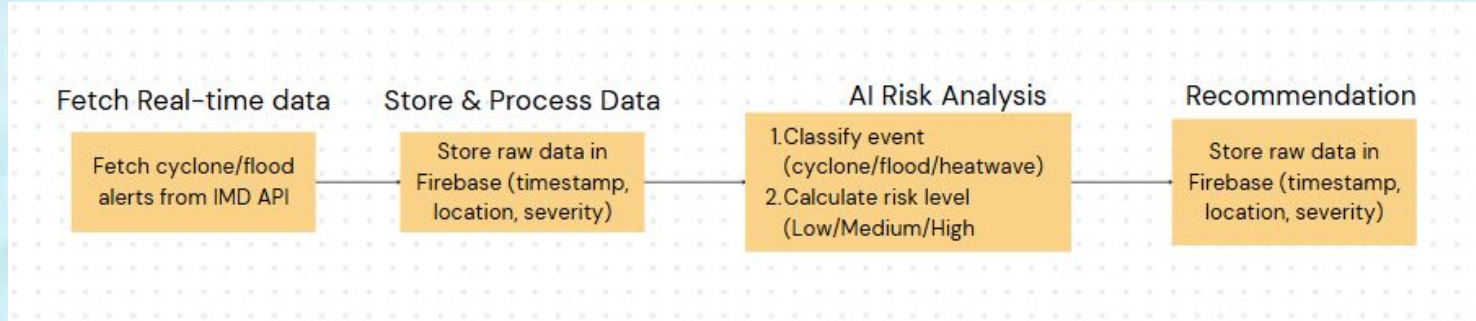


Innovation (Showstopper)

Dynamic Risk Adjustment Powered by AI & Live Data

- Eliminates predefined parameters to trigger payouts.
- Prevents revenue loss from outdated static pricing.

Workflow:

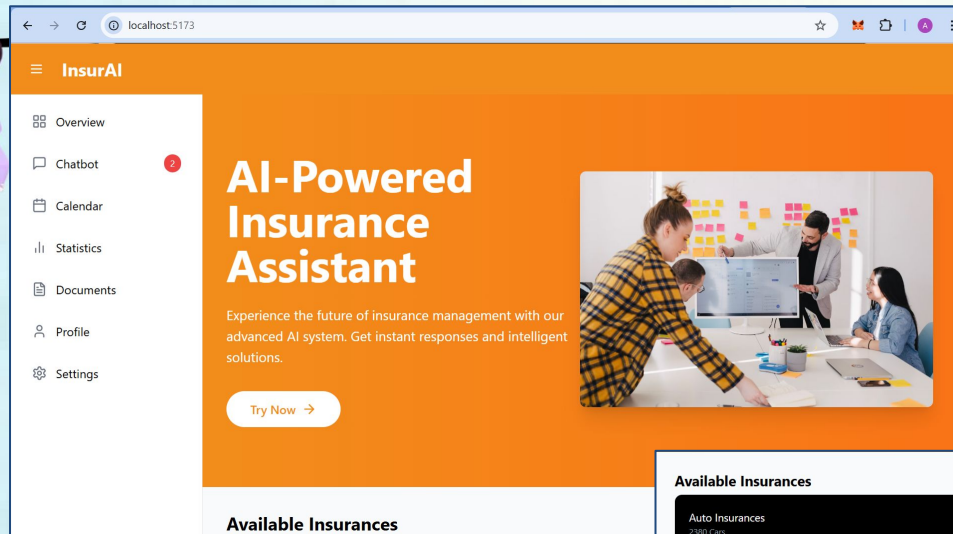


Tech Stack

- **Frontend** : React JS
- **Backend** : Python, Flask / FastAPI, Uptiq
- **APIs** : OpenWeather API, Gemini,
- **Database** : Firebase, MongoDB



Implementation/Prototype/Use Case Diagram (screenshots)



The screenshot shows the InsurAI Home Page. The browser address bar displays 'localhost:5173'. The page has a white sidebar with a menu containing 'Overview', 'Chatbot', 'Calendar', 'Statistics', 'Documents', 'Profile', and 'Settings'. The main content area has an orange header with the 'InsurAI' logo. Below the header, there's a large orange section titled 'AI-Powered Insurance Assistant' with a subtext 'Experience the future of insurance management with our advanced AI system. Get instant responses and intelligent solutions.' and a 'Try Now' button. To the right of the text is an image of three people in a meeting. Below this section is a white box titled 'Available Insurances'.

InsurAI

Overview

Chatbot

Calendar

Statistics

Documents

Profile

Settings

AI-Powered Insurance Assistant

Experience the future of insurance management with our advanced AI system. Get instant responses and intelligent solutions.

[Try Now](#)

Available Insurances

HOME PAGE

Live Risk Monitoring

- ⚠️ Hurricane approaching Florida – Risk adjustments applied!
- ⚠️ Health activity increase detected – Risk adjustments applied!

Parametric Pricing Adjustments

Policy Type	Affected Customers	Trigger Event	Previous Premium	New Premium	Status
Auto	2500	Hurricane approaching Florida	\$500	\$550	Adjust
Health	4689	Health activity increase detected	\$400	\$380	Adjust

Available Insurances

Auto Insurances

2380 Cars

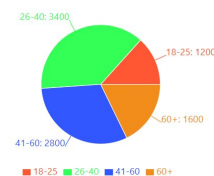
\$45,789 ~\$45,789 USD

Health Insurances

4689 People

\$145,789 ~\$39,789 USD

Claims Distribution by Age Group



Claim Approvals Per Month



Implementation/Prototype/Use Case Diagram (screenshots)

DOCUMENTS PAGE

InsurAI

Overview

Chatbot

Calendar

Statistics

Documents

Profile

Settings

Documents

Upload New

File Name	Document Type	Date	Size	Status	Actions
Auto Insurance Policy	PDF	Mar 28, 2025	2.4 MB	Approved	<div><div></div><div></div></div>
Health Insurance Claims	PDF	Mar 27, 2025	1.8 MB	Pending	<div><div></div><div></div></div>
Property Insurance Terms	DOC	Mar 26, 2025	956 KB	Approved	<div><div></div><div></div></div>
Insurance Certificate	PDF	Mar 25, 2025	1.2 MB	Pending	<div><div></div><div></div></div>
Policy Renewal Notice	PDF	Mar 24, 2025	845 KB	Approved	<div><div></div><div></div></div>
Claims Documentation	ZIP	Mar 23, 2025	4.7 MB	Pending	<div><div></div><div></div></div>

InsurAI

Overview

Chatbot

Calendar


Statistics

Documents

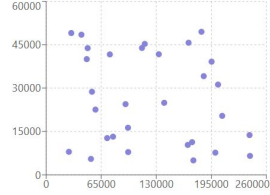
Profile

Settings

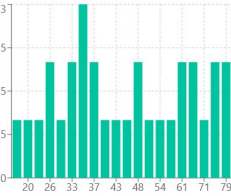
Plan Distribution



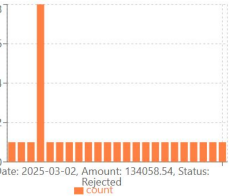
Premium vs. Deductible



Age Distribution



Claims Status Overview



STATISTICS PAGE

POLICY PREMIUM ADJUSTMENT BASED ON EVENTS

InsurAI

Overview

Chatbot

Calendar

Statistics

Documents

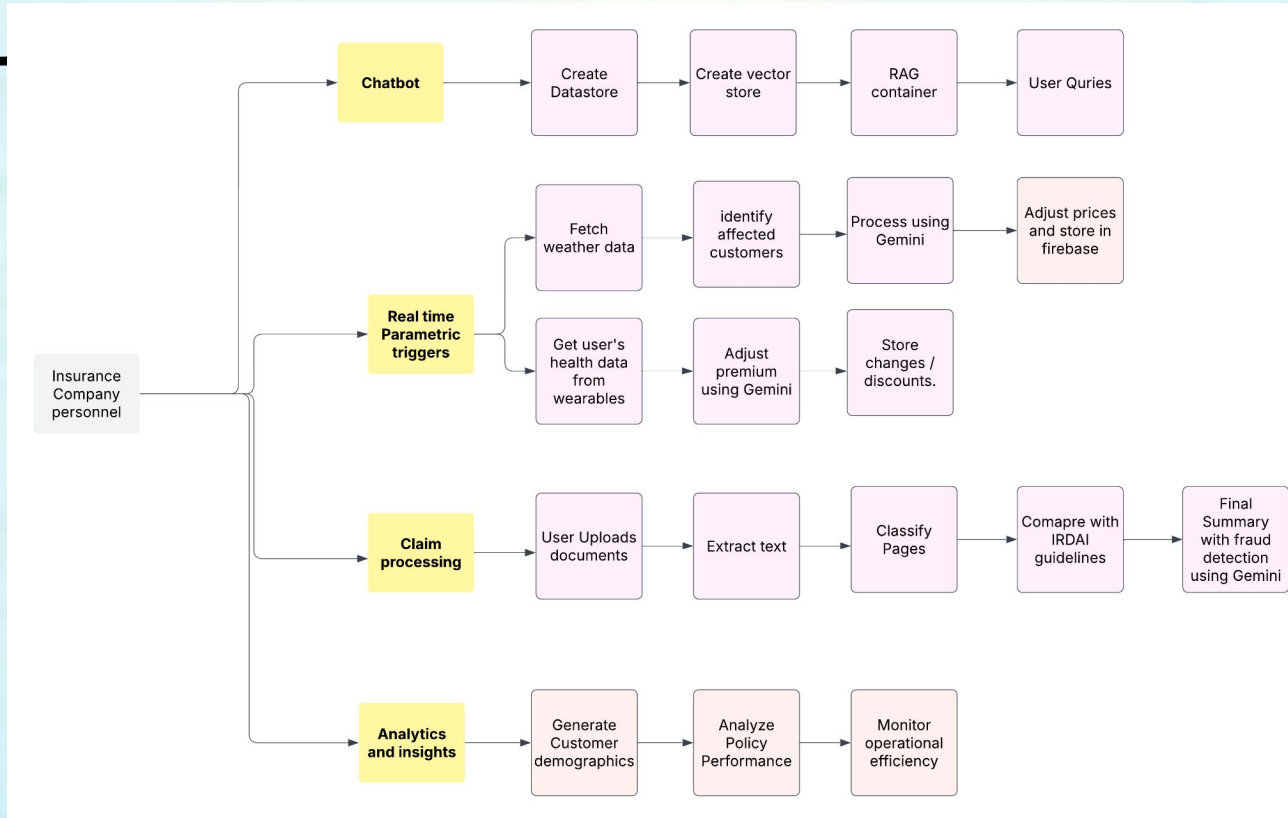
Profile

Settings

Affected Customers

Policy ID	Owner Name	Location	Age of Property	Original Premium	Adjusted Premium	Increase (%)	Summary
1616305560	Shravya Ram	Pune	51 years	₹37036.92	₹42592.46	15%	Policy adjusted due to elevated risk from Pune hurricane. Commercial property, aged 51 years, with steel construction. Adjustment is moderate due to structural resilience. Coverage includes Water Leakage Protection.
1996548267	Hemal Merchant	Pune	4 years	₹45387.29	₹54685.27	20.48%	Policy adjusted due to significant hurricane threat in Pune. Residential property, aged 4 years, with steel construction. Existing flood claim history necessitates a higher adjustment. Coverage includes Water Leakage Protection.
2092900200	Anika Mukherjee	Pune	35 years	₹21299.71	₹28490.99	33.76%	Policy adjusted due to elevated risk from Pune hurricane. Commercial property, aged 35 years, with wood construction. Wood structure increases vulnerability, leading to a higher adjustment. Coverage includes Flood Damage.
2639382670	Idika Parekh	Pune	77 years	₹48503.94	₹53354.33	10%	Policy adjusted due to increased hurricane risk in Pune. Residential property, aged 77 years, with concrete construction. Smaller adjustment due to strong structural integrity. No explicit flood or water damage coverage.
2996930853	Arjun Garde	Pune	12 years	₹46206.65	₹50827.32	10%	Dear Arjun Garde, Policy ID 2996930853 premium adjusted due to the hurricane in Pune. Your residential property, aged 12 years, with concrete construction means the adjustment is relatively lower. Your policy does not include specific flood or water damage coverage.

Implementation/Prototype/Use Case Diagram (screenshots)



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

Dashboard > Agents



Competitor Insights Extractor

competitor-insights-extractor-9815

Try Agent

Basic Config

Overview Sub Agents Workflows Knowledge PII Masking Secrets & Variables Agentic App Widgets

Sub Agents

Intents

Workflows

Web Crawler Insights

Extract Pricing Information

Workflow for Extract Pricing Information

Extract Product Features

Workflow for Extract Product Features

Extract Customer Reviews

Workflow for Extract Customer Reviews

Extract Promotional Offers

Workflow for Extract Promotional Offers

The Competitor Insights Extractor is an agent powered by UPTIQ that gathers and analyzes competitor data using web crawling techniques. It extracts key insights such as pricing information, product features, customer reviews, and promotional offers. The agent operates through a structured workflow, where sub-agents and automated processes streamline data collection and analysis, enabling businesses to make informed strategic decisions.



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

Dashboard > Agents



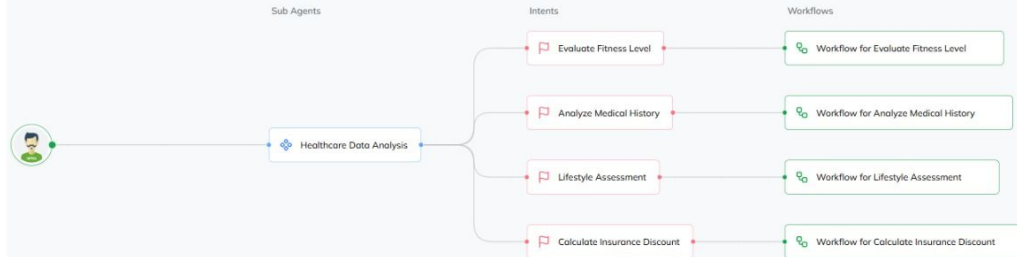
Dynamic Insurance Pricing Agent

dynamic-insurance-pricing-agent-1560

Try Agent

Basic Config

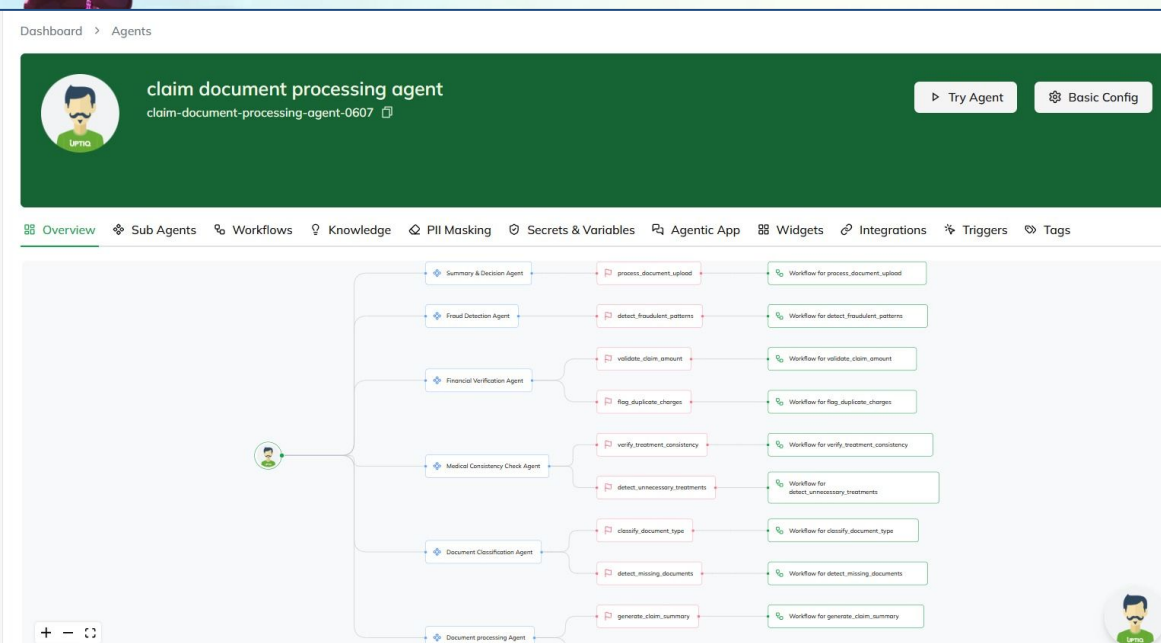
Overview Sub Agents Workflows Knowledge PII Masking Secrets & Variables Agentic App Widgets



The Dynamic Insurance Pricing Agent is an AI-driven tool that analyzes healthcare data to determine personalized insurance pricing. It evaluates factors such as fitness levels, medical history, lifestyle assessment, and insurance discounts through structured workflows. The agent helps insurers offer dynamic pricing based on user health insights, enabling more accurate and fair policy adjustments.



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




The Claim Document Processing Agent automates the validation and processing of insurance claims. It consists of multiple sub-agents handling document uploads, fraud detection, financial verification, medical consistency checks, and document classification. Each sub-agent has specific workflows to detect fraudulent patterns, validate claim amounts, flag duplicate charges, classify documents, and generate claim summaries. This AI-driven system enhances efficiency, reduces errors, and improves fraud detection in claim processing.

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

InsurAI chatbot RAG output.


RAG Playground

 **GPT 4**
The latest version of GPT from OpenAI.


Insurance chat app RAG

Filter Config

how many customers have taken maternity coverage?

 Based on 5 sources
Based on the provided data, all the five customers' insurance plans include maternity coverage.

How many customers have taken platinum plan provide me their names

 Based on 5 sources
Based on the data provided, three customers have a Platinum plan. Their names are as follows:

1. Rajeshri Bala
2. Nathaniel Naidu
3. Nakul Chatterjee

Enter query Send

Future Objectives

Blockchain for Claims Transparency

- Leverage blockchain to create immutable records of claims and policy adjustments.
- Enable smart contracts for instant policy validation and fraud prevention.

AI-Driven Parametric Relief Funds (Automated Payouts in Disasters)

- Use AI + IoT + Smart Contracts to create real-time insurance relief funds.
- Automatically trigger payouts before disasters impact customers.

