

# INSURANCE POLICY GENERATOR

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Internship Report  
Name : Aravindhan V  
Company : TCS  
Duration : 8 Weeks

Submitted in partial fulfillment of Internship Requirements  
Date: April 21, 2025

## Introduction:

This project is about simplifying the process of insurance policy creation using a chatbot and the MERN stack. The main goal was to build a web-based system where users can interact with a chatbot to select an insurance type, provide necessary information, get their premium calculated, and generate a downloadable policy document. This helps reduce the manual work and makes the process user-friendly and interactive.

## Tools & Technology Used:

- MongoDB – For storing user and policy data
- Express.js – Backend server
- React.js – Frontend interface
- Node.js – Server runtime
- Botpress – Used for building the chatbot
- PDFKit – For generating policy documents in PDF format
- Mongoose – For MongoDB data modeling

## Main Features

- Chatbot to guide users through the process
- Supports Life and Vehicle Insurance
- Premium is calculated based on input data
- Policy PDF is generated and downloaded
- All details are saved in MongoDB

## System Flowchart

## How It Works

- The user open the chatbot from the website and start the chat with chatbot
- The chatbot gives a welcome message and shows two options : Create a new policy and view existing policy
- Based on the user selection it starts the process.
- If the user selects create a new policy, it starts to collect the data from the user

- It collects user-specific and policy details.
- After, user-specific details is collect it shows the available insurance options: Life and Vehicle Insurnace
- After collecting the all necessary data, the bot sends a api request to the backend server to calculate the premium for the policy
- The bot shows the premium and asks the user whether to proceed.
- If the user agrees, the data is saved with “Active” status and a PDF policy is generated.
- If not, the data is stored with “Cancelled” status for future uses.

## Premium calculation Logic:

Life Insurance:

- Depends on age, term, and sum assured
- Older age = higher premium

Vehicle Insurance:

- Based on vehicle age, type of coverage (comprehensive or third-party), and driver history
- Example: New car with no accidents and comprehensive cover → lower premium
- Old car with accident history → higher premium

Formulas:

Life Insurance:

- Base Rate Factor:
  - Term Life Insurance : 1.5
  - Whole Life Insurance : 1.2
- Base Premium =