Digital Customer Journey for Life Insurance

Journey	Discover & Research	Onboarding & Quote	Underwriting & Purchase	Policy & Service	Claim & Payment	Engage & Loyalty
Process	- Customers search online and register interest. - Customer care validates requirements via call. - Agents contact customers to collect forms.	- Agent issue cost simulation and proposal - Quoting for premium and coverage	- Policy understanding - Policy issuance - Policy endorsements and riders	- Change Policy without re-underwriting - Renew policy, premium	- Customer reports a claim - Automated claim processing and management - Claim Payment	- Frequency interaction - IoT integration - Customer receives rewards or benefits from the insurance company
Few Use Cases	- **Predictive Lead Scoring:** ML models predict lead conversion probability. - **Automated Call Summarization:** GenAI summarizes customer care calls. - **Personalized Content Recommendations:** ML suggests products based on search. - **Chatbot for Initial Inquiry:** GenAI chatbot handles initial questions	- **Personalized Premium Prediction:** ML models predict premiums based on customer data. - **Risk Assessment Modeling:** ML assesses risk for accurate premium quoting. - **Dynamic Pricing Optimization:** ML adjusts premiums based on market conditions. - **Cost Simulation Tool:** ML-powered tool simulates various cost scenarios.	- **Risk Assessment Modeling: based on customer health and behavioral data** - Advance health risk prediction using Wearable & IoT Data - **Automated Document Processing & Fraud Detection**	- **Policy Understanding:** GenAI chatbot answers policy questions. - **Policy Issuance:** ML automates document generation. - **Policy Endorsements and Riders:** ML suggests relevant riders.	- **Fraud Detection:** ML models detect fraudulent claims. - **Automated Document Processing:** GenAI extracts data from claim documents. - **Claim Routing:** ML routes claims to the appropriate adjusters. - **Automated Payment Processing:** ML automates payment approvals.	- **Policy lapsation prediction:** a proactive measure to identify customers at risk of letting their policies lapse - **Personalized Engagement Campaigns** - **Health & Wellness Insights:** ML provides insights from IoT data to promote healthy habits and rewards. -**Chatbot for Rewards & Benefits:** GenAI chatbot assists with reward redemption and benefit inquiries.

Sample Use Case

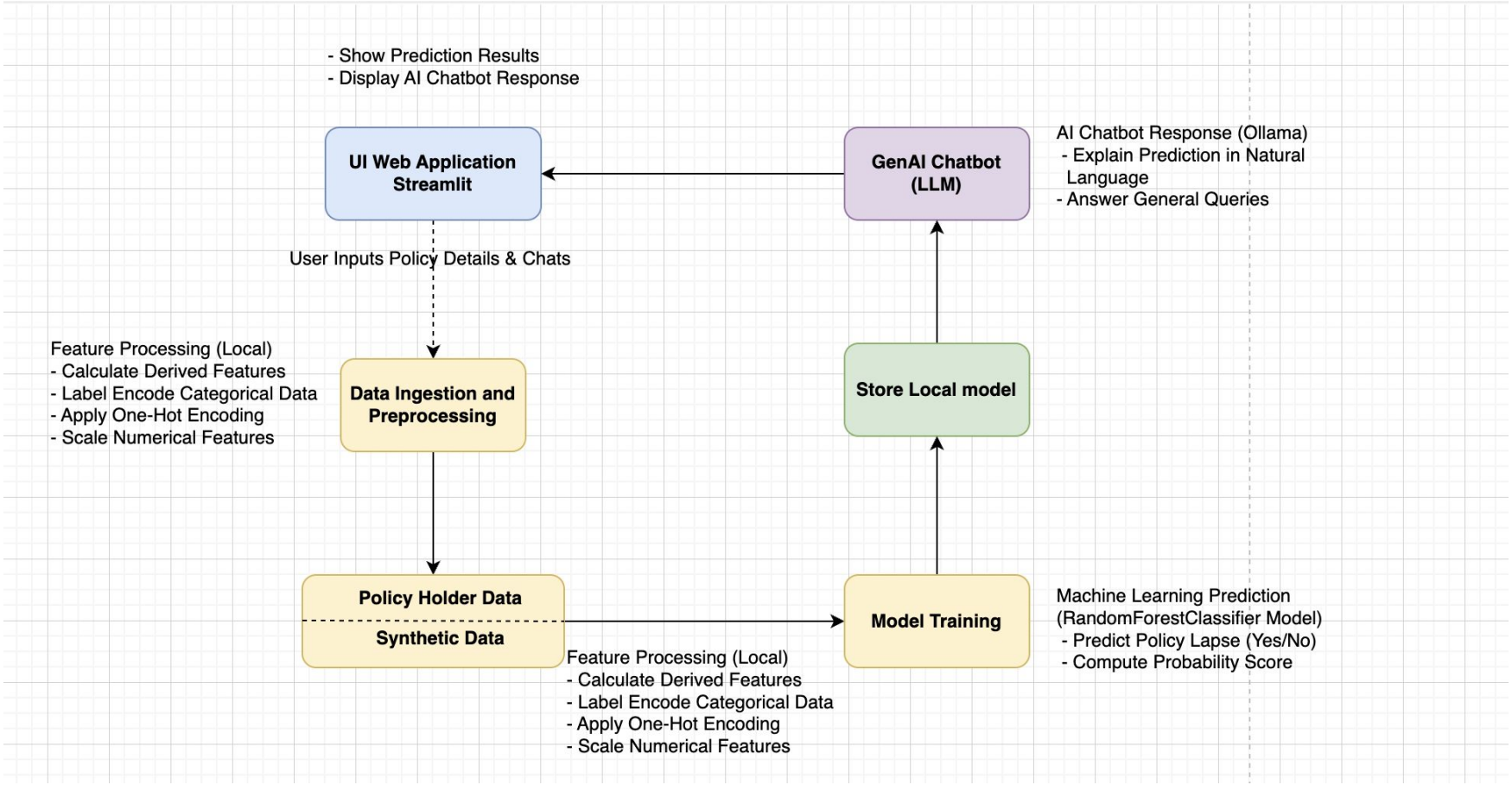
AI-Powered Policy Lapsation Prediction & Assistant Chatbot

Use case 1: AI-Powered Policy Lapsation Prediction & Assistant Chatbot

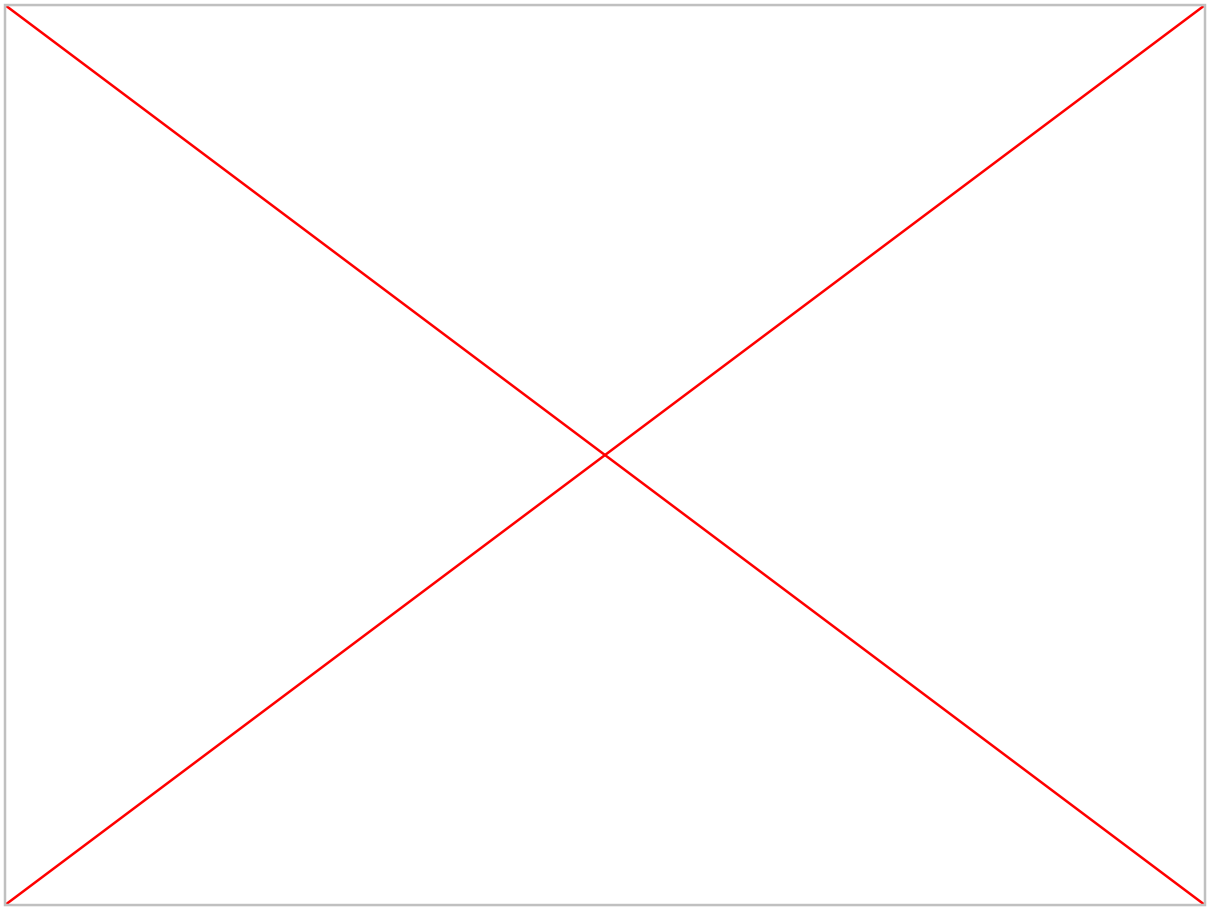
Business Objective	**- Personalized Customer Engagement:** Understanding customer has high risk of Policy Lapsation can help in engagement strategy with them - **Reduced Policy Lapsation**, Leading a high customer retention, high chance to get new customers
Solution Overview	**Policy Lapsation Prediction Model:** ● Created Synthetic Data with input features are including: Age; Gender; Income; Policy_Type; Policy_Tenure; Premium_Amount; Payment_Frequency; Missed_Payments; Claim_Frequency; Customer_Support_Calls; Social_Media_Sentiment and target variable: Policy_Lapsed ● Predict risk of Lapsation by using Random Forest ● Enables early intervention strategies by customer service teams. **GenAI Application** ● Takes inputs from policyholders & predicts lapsation risk. ● Suggests personalized solutions (e.g., policy renewal reminders, payment options). ● Acts as a virtual assistant for customer service representatives to guide interactions.
Technology used	**Streamlit, RandomForestClassifier (sklearn), Pandas, NumPy, Scikit-learn (StandardScaler, Label Encoding, One-Hot Encoding), Ollama, Llama 3.2:3B, Local Deployment.**

Link of project on Prediction model:
https://colab.research.google.com/drive/1Hb4vXKemJeWlw_FXCtb8jKkBWL-GV9m7#scrollTo=EVEzktkFdBwy

Use case 1: High level Architecture overview



Use case 1: AI-Powered Policy Lapsation Prediction & Assistant Chatbot



Thanks for your time