Title and Summary

Track Insurance Renewal and Upsell
Summary Build an AI agent that ingests a customer's policy document, extracts key fields, alerts on upcoming expiry, and nudges renewal. If sentiment and eligibility are positive, the agent proposes suitable upgrades. Delivery across Voice, Chat, and SMS in English and Hindi. Outcome is a working demo with clear APIs, mock or real.

Problem Statement

Insurers spend heavily to chase expiring policies. Human follow-ups are slow and inconsistent. Many customers lapse or switch to competitors. Precision depends on reading the policy file correctly. Structured extraction reduces errors, improves compliance, and enables timely, personalized nudges for renewal and upsell.

Solution Overview

The agent ingests a policy PDF or text. It extracts fields, validates them, and confirms expiry. It offers renewal with transparent pricing and benefits such as no claim bonus. It detects intent and sentiment to time an upsell to eligible add-ons or higher cover. It hands off to a payment flow or a human desk when needed. Channels Voice, Chat, SMS. Languages English and Hindi.

Data, Variables, and Schema

Required customer_name, customer_contact, policy_number, policy_type, insurer_name, expiry_date, premium_amount, no_claim_bonus_percent, coverage_summary, asset_details, last_payment_date.
 Optional payment_link, offer_code, discount_percent, cross_sell_candidates, upsell_candidates, policy_eligibility_flags.
 Mock schema

```
{
  "policy_number": "AB123456789",
  "policy_type": "Motor Comprehensive",
  "insurer_name": "Sample Insurance Co.",
  "customer_name": "Riya Sharma",
  "customer_contact": "+91-90000-00000",
  "asset_details":
{"make":"Maruti","model":"Baleno","year":2021,"registration_number":"KA01AB1234"},
  "coverage_summary": ["OD","Third Party","PA cover"],
  "expiry_date": "2025-10-15",
  "premium_amount": 12999,
  "no_claim_bonus_percent": 25,
  "last_payment_date": "2024-10-10",
  "eligible_upsell": ["Zero Depreciation","Roadside Assistance","Return to Invoice"]
}
```

Data policy Use real PDFs only with consent. Else mirror real formats with high quality mock data. Handle missing fields with clear prompts and safe defaults.

Intents, Dialog Flow, and Tone

Intents
 renew_now Confirm and collect payment. Ex: "Let's renew today." "Proceed with renewal."
 renew_later_date Capture date and reminder. Ex: "Next Friday." "Call me on 3rd."
 needs_discount Ask for offers. Ex: "Any discount?" "NCB apply?"
 needs_human_agent Escalate. Ex: "Talk to a person."
 modify_policy Change coverage or IDV. Ex: "Increase IDV." "Add driver."
 interested_in_upsell Positive to add-ons. Ex: "Tell me zero dep."
 switching_to_competitor Churn risk. Ex: "Going with X."
 not_interested Declines. Ex: "No renewal."
 callback_request Provide time window. Ex: "Call after 6."
 out_of_scope Off topic.

Dialog policy Confirm identity and consent. State expiry date and current premium. Present renewal benefits and NCB. Offer discount if policy rules allow. Attempt upsell only after positive sentiment and eligibility check. Always summarize choices before payment.

Tone Trustworthy, empathetic, clear, compliant, consultative, brief.
 Good "Your policy ends on 15 Oct. Renewal today keeps your NCB at 25 percent. Would you like to proceed?"
 Risky "This is the best plan for everyone."

APIs and Integrations

Choose any of these and mock if needed.

- **Document parsing** POST /v1/policy/parse
   Req { "file_url": "<pdf>" }
   Res { "policy_number":"AB123456789","expiry_date":"2025-10-15", … }
- **Intent detection** POST /v1/nlp/intent
   Req { "text":"I will renew today" }
   Res { "intent":"renew_now","confidence":0.94 }
- **Sentiment** POST /v1/nlp/sentiment
   Req { "text":"Sounds good. Go ahead." }
   Res { "sentiment":"positive","score":0.81 }
- **Payment or mock payment** POST /v1/payments/initiate
   Req
   { "policy_number":"AB123456789","amount":12999,"return_url":"https://example/cb" }
   Res { "payment_link":"https://pay.example/xyz","id":"pay_123" }
- **Notifications** POST /v1/notify/sms
   Req { "to":"+919000000000","text":"Your renewal link …" }
   Res { "status":"sent","id":"msg_1" }

Ops guidance Set retry policy with backoff. Use idempotency keys for payments. Redact PII in logs. Respect rate limits.

Best Practices

Validate extracted fields. Parse dates with strict formats. Format currency with locale rules. Confirm critical details before payment. Keep upsell optional and transparent. Provide clear opt out. Handle silence with two gentle reprompts, then SMS or callback offer. Log consent and decisions.

Edge Cases and Test Plan

For each case, give input, expected agent behavior, and acceptance check.

- policy_already_expired Input expiry in past. Explain reinstatement or fresh policy. Check clear next step.
- missing_expiry_date Input lacks date. Ask for document page or send secure upload link. Check capture.
- invalid_policy_number Input fails checksum. Reconfirm and reparse. Check corrected value.
- duplicate_customer_records Two matches. Disambiguate by phone or vehicle reg. Check selected record.
- angry_customer Negative sentiment. Apologize, de-escalate, offer callback or human. Check tone tags.
- silent_line_or_dead_air No reply 10 seconds. Reprompt twice, then offer SMS link. Check timeout path.
- DND_or_opt_out Flag present. Stop outreach. Confirm channel for updates. Check no further messages.
- wrong_language Customer uses Hindi. Switch language and continue. Check language tag.
- payment_gateway_timeout 504 on pay. Reassure, retry once, share link by SMS. Check idempotent retry.
- upsell_policy_not_eligible Add-on blocked by age or plan. Explain reason and skip. Check explanation.

Two transcripts
Happy path with upsell
A "Ms Sharma, your Motor Comprehensive policy ends on 15 Oct. Renewal keeps your 25 percent NCB. Proceed now?"

C "Yes."
A "Premium is twelve thousand nine hundred ninety nine. Pay by secure link or UPI?"
C "Send the link."
A "Sent. One more thing. Zero Depreciation is eligible for your Baleno. It reduces out of pocket costs. Add it?"
C "Yes, add it."
A "Updated amount shown on the link. I will wait while you complete it."
C "Done."
A "Payment received. Your renewed policy and add-on will arrive by SMS and email. Anything else today?"

Deflection with callback
A "Your policy ends on 15 Oct. Would you like to renew now?"
C "Not now. Call me on 3 Oct evening."
A "Noted for 3 Oct after 6 pm. Do you prefer English or Hindi?"
C "Hindi."
A "Great. I will call in Hindi. I have sent a link if you choose to renew earlier. Will that work?"
C "Yes."
A "I will follow up as scheduled. You can reply to reschedule at any time."

Compliance and Ethics

No unauthorized PII sharing. Respect DND and opt outs. Explain charges and terms clearly. Log consent for follow ups. Avoid misleading claims. State exclusions for add-ons in plain language.

Deliverables and Submission Format

Submit a single PDF named **Team Name_Inya_Final.pdf** that contains

1. Cover with team name, members, contact, Agent link
2. YouTube links per rules. Multiple links allowed for scenarios
3. README summary using the listed sections
4. API spec summary with endpoints and payload shapes
5. Policy schema mapping table and one parsed example
6. Test plan and the two transcripts

7. Limitations and next steps

   Also share a repo link or code bundle if asked. Deadlines 30 September 2025, 23:59 IST. Live demo 07 October 2025. Queries to **sabhareesh.muralidharan@gnani.ai**.