Workflow

---

1. User Interaction

- **Frontend type**: A **chatbot-style web UI** (simpler than building a complex dashboard).

- **User flow**:

    1. User asks a natural question like *“What is the Tatkal booking window for AC 3-Tier?”*.
    2. Backend retrieves relevant policy snippets (chunked PDFs/FAQs).
    3. Model generates a clear, simplified answer citing the retrieved text.

---

2. Knowledge Base

- Start with **preloaded content**. Two Docs. Indian Railways – E-Ticket Cancellation & Refund Rules.pdf CancellationRulesforIRCTCTrain.pdf

---

3. MVP Features

- **Ask a rule**: "Can I cancel a Tatkal ticket?" → Returns simplified, retrieved answer.
- **Booking policies**: "When can I book a ticket for tomorrow?"
- **Refund rules**: "How much money will I lose if I cancel 2 hours before departure?"

That’s already a useful assistant.

In Short

For today’s prototype:

- Make it a **chatbot**.
- Preload it with **rules for booking, cancellation, refunds, and Tatkal**.
- Focus on **retrieval + simplification** of answers.

Questions Supported by our Bot

---

1. Standard Cancellation Rules

- *“How much will be deducted if I cancel an AC 2-Tier ticket 2 days before departure?”*
- *“What happens if I cancel a sleeper ticket 6 hours before the train leaves?”*

---

2. After Chart Preparation / TDR

- *“Can I cancel a confirmed ticket after the chart is prepared?”*
- *“How do I file a TDR if my coach had AC failure?”*
- *“What’s the deadline for filing a TDR if my train was diverted?”*

---

3. Waitlist and Partial Tickets

- *“What refund do I get if my waitlisted ticket is cancelled?”*
- *“What if my whole ticket is still waitlisted after charting?”*
- *“We booked as a group, some confirmed, some RAC. What refund do we get if we don’t travel?”*

---

4. Tatkal Rules

- *“Can I get a refund if I cancel a confirmed Tatkal ticket?”*
- *“Is partial cancellation allowed for Tatkal tickets?”*

---

5. Train Cancellation / Diversion

- *“Do I need to file TDR if the train itself was cancelled?”*
- *“What if my train was short-terminated and didn’t reach the destination?”*

---

6. Train Running Late

- *“If the train is more than 3 hours late, do I get a refund?”*
- *“What if I didn’t board because the train was delayed?”*

---

7. Refund Timelines & Process

- *“When will my refund come if I cancel online?”*
- *“Do I need to send documents if the coach was damaged?”*

---

8. Agent vs. Normal User Rules

- *“How can an agent cancel after chart preparation?”*
- *“What email does an agent use to request TDR?”*

Memory

1. Short-Term Conversation Memory (Session Memory)

Why: Users will ask follow-up questions like: “What if it’s a Tatkal ticket?” after “How do I cancel a confirmed ticket?”

How: Store the last few user–assistant turns (say 3–5 exchanges). This helps maintain context without bloating.

2. Domain Memory (Static Knowledge Base)

This is your preloaded RAG documents (cancellation, refund, Tatkal rules).

It’s not dynamic memory—it’s your knowledge source.

Technology Choice

- **Chunking**: Hybrid (section-based + 500 token cap + 10% overlap).

- **Embeddings**: `text-embedding-3-small` for MVP.
- **Storage**: Chroma vector DB