AI- Scribe Sample Architecture:


```
┌─────────────────────────────┐
│      Doctor Frontend         │
│   --> UPLOAD AUDIO FILE       │
│   -->  VIEW SOAP NOTES        │
└─────────────────────────────┘
              │
              ▼
┌─────────────────────────────┐
│      Backend Server          │
│     (PYTHON FAST-API)         │
│   --> API FOR FILE UPLOAD     │
│   --> AUTH + ERROR LOGGING    │
└─────────────────────────────┘
              │
              ▼
┌─────────────────────────────┐
│      Transcription API       │
│   ( WHISPER / GOOGLE STT )    │
└─────────────────────────────┘
              │
              ▼
┌─────────────────────────────┐
│       LLM Note Engine        │
│    ( GPT-4 API / CLAUDE )     │
│   --> PROMPTED TO CREATE SOAP │
└─────────────────────────────┘
              │
              ▼
┌─────────────────────────────┐
│     OutPut Storage (DB)      │
│   --> NOTES, TRANSCRIPTION    │
│   --> PATIENT NAME + DATA      │
└─────────────────────────────┘
```
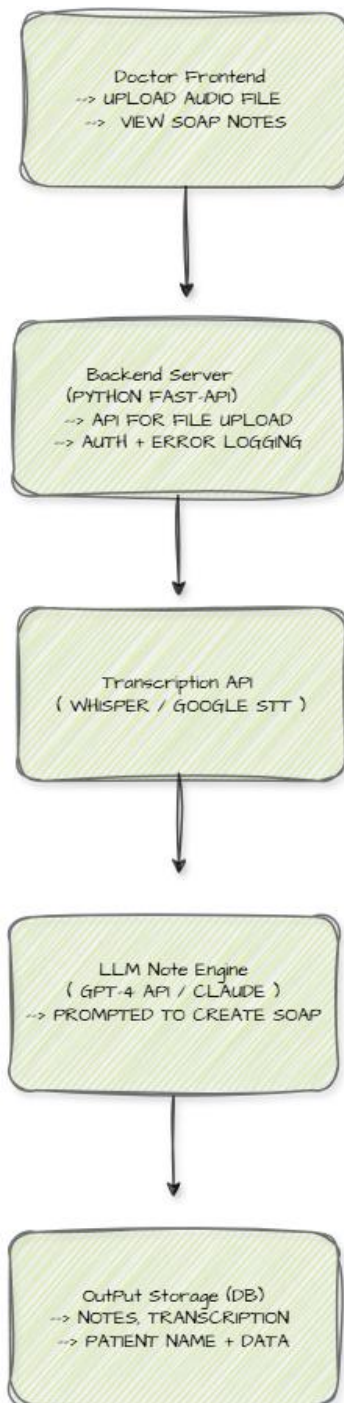
SAMPLE ARCHITECTURE DESIGN FOR AI SCRIBE

AI- Scribe Roadmap:

Step 1: Planning & Setup:

- Define scope: Focus on recording doctor speech, transcribing it, and generating SOAP notes using an LLM.
- Set up development environment: Git repo, cloud services (e.g., AWS/GCP), choose tech stack.
- Prepare sample GI/obesity consultation audio/text data.

Step 2: Transcription Module

- Use OpenAI Whisper or Google Speech-to-Text API.
- Test with a few short clinical audio recordings.
- Output plain text from voice reliably.

Step 3: AI Note Generator

- Build prompt templates for SOAP note generation.
- Connect transcription output to GPT-4 or Claude to convert into structured SOAP format.
- Ensure medical terminology is retained.

Step 4: Minimal Web UI

- Build a simple frontend using React:
- Upload audio file.
- Display transcription.
- Show AI-generated SOAP note.

Step 5: Integration & Testing

- Connect frontend to backend via API (FastAPI or Flask).
- Run E2E tests with 3–4 real-world consultation recordings.
- Validate note quality and accuracy.

Step 6: Polish & Security

- Add basic authentication (email/password).
- Implement data encryption at rest and in transit.

Step 7: Demo & Feedback

- Conduct demo with target doctors or stakeholders.
- Collect feedback.
- Log bugs or issues for future sprints.