# **Development Timeline**



### Research & Planning

Researched voice
automation systems,
studied Whisper,
mistral-instruct
, and Google TTS.
Defined main objectives
and designed project
structure.



# System Architecture Design

Outlined data flow between components (speech\_io, Ilm\_interface, scheduler). Created prompt templates and decided integration strategy.



#### Environment Setup & Core Implementation

Set up the virtual environment, dependencies, and .env file. Implemented speech recognition (Whisper) and initial LLM integration.



#### Voice Interaction Loop

Built the full voice-totext → LLM → text-tospeech pipeline for conversational flow. Tested transcription and response accuracy.



## Scheduling & Integration

Developed
appointment
management with
booking, canceling, and
listing. Integrated
dummy API and local
calendar syncing.



## Debugging & Testing

Fixed bugs, validated inputs, and ensured error-free handling.
Conducted full system test for all voice commands and workflow.



### Documentation & Presentation

Completed README, test report, and demo preparation. Finalized slides and rehearsed presentation.

Day 1

Day 1

Day 2

Day 2

Day 3

Day 3

Day 4