**Tasks**

1. Environment Setup [All Members]

| Date | Task | Time Spent |
| --- | --- | --- |
| 02.04.2025 | Configure shared tools (Git, IDE, Anaconda, etc.) |  |
| 02.04.2025 | Set up Google Colab |  |
| 02.04.2025 | Agree on APIs/libraries |  |

2. Audio Input (Capture) [Shafik]

| Date | Task | Time Spent |
| --- | --- | --- |
|  | Capture raw microphone input from a user |  |
|  | Noise cancellation and voice activity detection (VAD) |  |

3. Speech-to-Text (STT) [Bassem]

| Date | Task | Time Spent |
| --- | --- | --- |
|  | Convert captured audio to text |  |
|  | Text string for LLM processing |  |

4. LLM Text Processing [Ivan]

| Date | Task | Time Spent |
| --- | --- | --- |
|  | Generate context-aware responses from user input |  |
|  | Initialize LLM (e.g., OpenAI API, local Llama 3) |  |
|  | Raw LLM response text |  |

5. LLM Prompt Engineering [Daniel]

| Date | Task | Time Spent |
| --- | --- | --- |
|  | Manage conversation history and optimize prompts. |  |
|  | Maintain a rolling chat history stack (e.g., the last 5 messages) |  |
|  | Engineer prompts for tone/context |  |

6. Text-to-Speech (TTS) [Fatima]

| Date | Task | Time Spent |
| --- | --- | --- |
|  | Convert LLM responses to natural speech |  |
|  | Audio stream for playback |  |

7. User Interface [Juraj]

| Date | Task | Time Spent |
| --- | --- | --- |
|  | Simple UI for interaction |  |
|  |  |  |

8. Integration [All Members]

| Date | Task | Time Spent |
| --- | --- | --- |
|  | Connect all modules together |  |
|  | Mic → STT → LLM (Prompt Engine) → TTS → Speaker |  |

9. Testing & Refinement [All Members]

| Date | Task | Time Spent |
| --- | --- | --- |
|  | Accuracy |  |
|  | Latency |  |
|  | Optimize LLM context |  |

10. Documentation & Reporting [All Members]

| Date | Task | Time Spent |
| --- | --- | --- |
|  | Setup instructions and module descriptions |  |
|  | Flowchart: System architecture |  |
|  | Video demo: End-to-end walkthrough |  |

**Meetings (attended by All Members)**

28.03.2025 – Team communication management [1 hour]  
30.03.2025 – Task definition and distribution [2 hours]

02.04.2025 – Agreement on tools to use [1 hour]