project Charter: intelligent Assistant for PC

Project Name: intelligent Assistant for PC

Project Sponsor: Eng. Alhassan Mohamed

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Project Purpose and Justification:

The purpose of this project is to develop an innovative AI-based assistant designed for Windows and PC platforms. Unlike existing voice assistants such as Siri or Google Assistant—which are limited to mobile ecosystems—Intelligent Assistant aims to bring a powerful, lightweight, and privacy-focused AI companion to desktop environments

The project addresses the growing need for an intelligent productivity tool that runs efficiently on low-end systems, provides safe interactions through a built-in NSFW content filtering system, and enhances user experience with document summarization and real-time assistance. It supports digital transformation and accessibility by enabling users to interact naturally with their computers through voice or text.

Project Description:

This project involves designing and developing a desktop-based intelligent assistant application compatible with Windows PCs. The assistant will integrate voice recognition, natural language processing (NLP), and automation capabilities to support users in managing routine operations such as reminders, searches, file management, and application control.

Project Objectives:

- Develop a fully functional desktop AI assistant by April 2027.
- Achieve compatibility with Windows 10 and Windows 11 operating systems.
- Enable voice and text-based user interaction with over 90% command accuracy.
- Automate at least 10 key PC operations (file management, browsing, reminders, etc.).
- Important feature : hide sensitive content
- Provide a user-friendly and responsive graphical interface.

Deliverables:

Fully functional Intelligent Assistant (Windows client + backend API)

NSFW content moderation and safety filtering module

Summarization engine for documents and projects (PDF/text)

Text-to-Speech (TTS) and Speech-to-Text (STT) capabilities

Public API documentation and SDK for developers

User manual and online help resources

Milestones & Timeline:
- Requirements analysis: Oct 2025 – feb 2026
- System design and architecture: Mar 2026
- Development and integration: Jan – Mar 2026
- Testing and debugging: Mar – Apr 2027
- Deployment and user training: Apr 2027

Technical Requirements:

Platform: Windows desktop application and REST API (cross-platform backend)

Backend Framework: Fast API (Python) or Node.js (Express)

AI Engine: LLM-based (Llama, Mistral, or GPT-compatible) for local or cloud inference

Moderation System: Multi-layer NSFW content filtering (rule-based + ML classifier)

Database: PostgreSQL or SQLite for lightweight configuration and logs

Performance: Must handle concurrent requests with low latency2>) s response under normal load(

Security: End-to-end encryption (TLS), local data privacy options, and no third-party data sharing

User Interface: Minimalistic, voice and text command support, responsive design

Integration: Open API for developers to integrate with other software

Audio Processing: Built-in TTS and STT support using local or cloud models

Resource Efficiency: Runs smoothly on systems with 4GB RAM and dual-core CPUs

Limits and Exclusions:
- This project does not include mobile or web versions of the assistant.
- Integration with third-party apps will be limited to supported software (e.g., browsers, Office tools).
- The project excludes hardware development or purchases.
- Continuous online AI training or cloud storage will not be part of this phase.
- Future expansions such as cross-platform support will require separate project funding.

Approval:
Project Sponsor: _____ Date: _____

Project Manager: _____ Date: _____