

Desktop AI Assistant - UI Specification

1. Functionality Overview

- Sidebar with Controls (SER, FER, TTS toggles, LLM selector, Metrics panel) - Main Area with: * Video feed with FER overlay * Chat stream with SER emotion badges * SER confidence sparkline * System metrics display - Bottom bar: Mic toggle, Push-to-talk, File upload, Settings

2. Architecture & Design Choices

- Electron front-end for cross-platform desktop support - Python backend (FastAPI + aiortc) for real-time processing - WebRTC for low-latency audio/video/data - Modular model loader for LLM (Gemma), SER, FER - Metrics & Alert hooks for Grafana/Prometheus integration

3. Text UI Mockup

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| [ Sidebar - left ] |           [ Main Area - right ]           |
| -----+----- |
| Connect / Settings | [Video / FER Overlay]                    | | |
| [x] SER            | ----- |
| [x] FER            | | Chat Stream with Emotion Badges | |
| [x] TTS            | ----- |
| LLM: [gemma-local] | SER Confidence Sparkline                 |
| Metrics / Alerts   | System Metrics (CPU / GPU / Latency)|
+-----+-----+
| Bottom Bar: Mic | Push-to-Talk | File Upload | Settings      |
+-----+-----+
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