WizzDev

End-to-end partner from hardware ideas into market-ready IoT products.

Executive Assist

To streamline executive workflows, we developed Executive Assist, a secure, voice-activated hardware interface. The system utilizes the Nvidia Jetson Nano for local Edge AI processing, running Large Language Models (LLMs) on-device. This architecture ensures low-latency response times and data localization by eliminating cloud dependency. The device executes multi-variable tasks, including autonomous meeting scheduling via calendar integration and environmental control via IoT protocols. The Proof-of-Concept (PoC) validated this architecture, demonstrating the reliability and data security standards necessary for executive-level deployment

Time Estimates

Milestone	Description	Min Time [h]	Max Time [h]
High-Level System Architecture & Design Specification	Defined the Local Edge AI architecture with on-device data processing using Nvidia Jetson Nano, mapping local inference workflows to ensure secure handling of confidential data.	40	46
Core Hardware Prototype Assembly and OS Deployment	Assembled hardware stack (mic, speakers, screen) and deployed a custom OS configured for real-time voice signal processing.	50	56
Edge AI and LLM API Integration	Implemented the on-device LLM and API layer, enabling local processing of complex natural language requests like scheduling and data retrieval.	62	78
Custom GUI Development and UX Animation Implementation	Touch-responsive UI development with custom animations to visualize voice interaction states for a State-based visual feedback for voice interactions.	99	132
Initial Enclosure Design and 3D Print Validation	Created CAD models and 3D-printed mockups to validate component fit, thermal airflow, and the compact desktop form factor.	50	70
Finalized Mechanical Design and Second-Stage Prototype Build	Refined mechanical design for durability and assembly, producing a polished "works-like, looks-like" prototype to demonstrate the final product.	15	24
End-to-End System Integration and Functional Validation	Unified hardware, AI, and IoT protocols into a functional system, validating response accuracy and latency for smart office controls and automation.	20	24
Project Management	Managed engineering timelines and resources throughout the PoC, ensuring technical feasibility and milestone tracking.	32	45
Summary of hours without risks:		**368**	**475**

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Note: Actual hardware design is strictly confidential. Images shown are illustrative representations of the device class and form factor.

Risk Estimates

Description	Min Time [h]	Max Time [h]
Supply Chain Volatility & Delivery Delays	0	0
Hardware Component Integration Failure	0	5
Peripheral Recognition and Instability	0	8
Electromagnetic Interference (EMI) within Enclosure	0	8
External API Integration Instability and Latency	0	20
Voice Command Accuracy and LLM Inference Performance	0	8
Long-Term Scaling Constraints and Technical Debt	0	5
Mechanical Design Mismatch and Component Alignment Failure	0	16
Summary of risk hours:	**0**	**70**

About Us

WizzDev delivers advanced IoT solutions, combining software, firmware, and hardware expertise to turn ideas into market-ready products. As AWS partners, we build scalable, cloud-integrated systems for smart home, smart cities and medtech. Our agile team adapts quickly, optimizes complex hardware, and stays ahead of tech trends ensuring your project is future-proof. Let's build the future together.

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WizzDev-IoT