Universal Assistant for Task-Oriented Device Ecosystem (UNITE)

Seamless, Adaptive, and Intelligent Technology at Work

Problem Statement

- Building interactive solutions across devices to enhance productivity and create transformative technologies.

Solution Overview

- UNITE is a smart assistant-driven ecosystem that enables a unified, adaptive, and intelligent environment for managing tasks, workflows, and communication seamlessly across devices.

Key Features

- 1. Dynamic Device Switching: Auto-context transfer for seamless workflow.

- 2. Multi-Device Shared Interfaces: Shared workspace across devices.

- 3. AI-Powered Collaboration Hub: Centralizes communication and task management.

- 4. Energy-Aware Optimization: Ensures energy-efficient task handling.

- 5. Device Pairing via Visual and Spatial Recognition: Secure interconnection.

Technology Stack

- 1. Edge AI: Localized device intelligence using TinyML.

- 2. Cross-Platform Frameworks: Flutter, React Native, and Electron.

- 3. Communication Protocols: NFC, Bluetooth 5.0, and local Wi-Fi hotspots.

- 4. Cloud Infrastructure: AWS Greengrass, Azure IoT Edge.

- 5. AR Integration: Vuforia, Google ARCore.

Use Case Example

- Scenario: A freelancer managing multiple projects.

- 1. Morning Routine: Starts a to-do list on a smartwatch.

- 2. Task Assignment: AI prioritizes tasks, accessible on a laptop.

- 3. Collaboration: In a video meeting, presentations displayed via AR projector.

- 4. Evening Update: Summary notifications displayed on smart glasses.

Conclusion

- UNITE empowers users with an adaptive, seamless, and energy-efficient ecosystem that integrates devices and simplifies task management for maximum productivity.