# OmniControl - Intelligent Desktop Mode Assistant

OmniControl is an intelligent personalised desktop agent built to enhance productivity and streamline transitions between daily computing workflows. Modern PC users—whether they are gamers, professionals, students, or job seekers—often find themselves repeatedly opening, closing, and switching between applications. These manual actions waste time, reduce efficiency, and break focus. OmniControl combines AI, automation, and a voice-controlled interface to simplify this experience.

## Problem Statement

Users experience significant digital friction when shifting between work, gaming, and focus-intensive states. For example, gamers must close work tools and open gaming platforms like Discord or OBS; professionals need a clean, distraction-free environment with only work apps like Teams, Word, and Outlook. Students often get distracted by games or browsers during study time. Meanwhile, job seekers are burdened with manually navigating job portals and applying for roles repeatedly. These transitions are repetitive, error-prone, and a major source of inefficiency.

## Proposed Solution

OmniControl eliminates these problems by functioning as a smart agent capable of switching modes through voice or browser interaction. Each mode is tailored:  
- 🎮 Game Mode: Terminates background tasks, boosts performance, and opens Discord.

- 💼 Work Mode: Closes entertainment apps and launches productivity suites like MS Word and Microsoft Teams.

-🎯 Focus Mode: Terminates all social media apps.

- 📉 Job Search Mode: Closes distractions and opens LinkedIn and other job portals.

- ❌ Exit Mode: Returns the system to a neutral state by closing previously opened tools.  
In addition to this, OmniControl learns dynamically over time. It builds a memory of what apps are frequently open in each mode and adjusts future executions accordingly.

## Architecture & Components

- 🧠 Core Agent: Developed in Python, it uses psutil and PyAutoGUI for GUI control and process monitoring.  
- 🗣 Voice Input: Uses Google Speech API and pyttsx3 for voice recognition and response.  
- 🧠 Dynamic Memory: Each mode tracks the apps commonly used and learns which to auto-launch or close, stored in JSON.  
- 🌐 Flask Server: A lightweight web server offers a browser-based control panel.  
- 💻 Frontend UI: HTML, CSS, and JavaScript make for a user-friendly dashboard.  
- 🔁 Subprocess Integration: Flask buttons trigger the AI logic in real-time using subprocess calls to main.py.

# Key Features by Mode

• Game Mode: RAM boosting simulation, app cleanup, Discord/OBS launch  
• Work Mode: Opens Teams/Notion, closes games, performance optimization  
• Focus Mode: Only allow selected apps; blocks browsers/games temporarily  
• Unemployed Mode: Opens LinkedIn/Indeed, closes all distractions, boosts motivation  
• Learning Mode: Records click/mouse sequences and saves them as voice-triggered macros

## Future Scope

OmniControl has the potential to evolve into a fully autonomous personal desktop assistant. Planned features include:  
- Integration with ChatGPT/LLMs for smarter task parsing.  
- Job auto-apply capabilities that adapt resumes and autofill applications.  
- Screen OCR and vision models to detect and interpret GUI changes.  
- Biometric-based detection to switch modes based on presence.  
- Task tracking, Pomodoro integration, and cross-device sync.  
Ultimately, the goal is to build an AI assistant that truly collaborates with users—not just automates clicks, but learns and evolves.