

User Manual for G.E.S.C.O.N

Gesture-Enabled System for Contactless Operations and Navigation

Overview

G.E.S.C.O.N is an advanced gesture-based interface designed for contactless interaction with computing systems. Currently in the Alpha Testing Phase, the system leverages a combination of hand gestures and voice input to navigate and operate. It utilizes a working camera and microphone to interpret gestures and commands, making it an intuitive tool for hands-free control.

Important Usage Notes

1. Alpha Testing Caution:

The system is in its Alpha Testing Phase. Avoid leaving it unattended, as unintended operations may occur, potentially leading to inconvenience or disruption.

2. Exiting the System:

To safely exit, select the Video Feedback Window and press 'q'.

3. Voice Input Behaviour:

- During voice input, the system may appear unresponsive due to a lack of parallel processing. This is normal and does not indicate a malfunction.
- **Internet Requirement:** For the voice recognition feature used in typing, ensure the system is connected to the internet. The functionality relies on online processing to interpret spoken commands accurately.

4. Optimal Operating Conditions:

- Ensure good lighting for accurate gesture recognition.
- Confirm that the camera and microphone are functional before using the system.

5. Frame Considerations:

- The system registers and monitors only one palm at a time.
- Avoid having multiple human entities in the camera frame to prevent potential misinterpretations or errors.

Gesture Controls

Cursor and Click Operations

- **Control Cursor Movement:** Extend and hold the **Index Finger**.
- **Left Click:** Extend the **Index and Middle Fingers** once.
- **Double Left Click:** Hold the extension of the **Index and Middle Fingers** for more than 0.5 second.

- **Right Click:** Extend the **Index, Middle, and Ring Fingers** once.

Additional Functionalities

- **Voice Input Activation:** Extend the **Index, Middle, Ring, and Pinky Fingers** once.
- **Open Recent Apps Screen:** Extend **all five fingers** once.
- **Hold Left Mouse Button:** Form a **closed fist**.

Troubleshooting and Recommendations

- **Gesture Recognition Issues:** Ensure your hand is fully visible in the frame and avoid obstructing the camera.
- **Lighting:** Dim or uneven lighting may reduce system accuracy. Adjust room lighting for optimal results.
- **Voice Input Challenges:**
Confirm the system is connected to the internet for voice recognition features to function properly.
If issues persist, ensure the microphone is operational and positioned to capture your voice clearly.
- **System Freezes During Voice Input:** This is expected behaviour in the Alpha phase. Wait for the system to process the input.
- **Multiple Individuals in the Frame:** Keep the frame free of additional human presence to prevent confusion in gesture detection.

Conclusion

G.E.S.C.O.N offers a revolutionary approach to contactless navigation but remains under development. Please adhere to the guidelines outlined above for safe and effective operation. Your feedback during this phase is invaluable and will contribute to refining the system for its next release.

For any inquiries or to report issues, please contact the development team.