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DEPARTMENT OF INFORMATION TECHNOLOGY

NAAC

Real Time Project Review

on

AIRBOARD USING HAND GESTURES

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ABSTRACT

- Air board hand gestures are a novel form of interaction that enables users to manipulate virtual objects in a three-dimensional space using natural hand movements.

- These gestures allow for intuitive and precise control, providing a more immersive and engaging user experience compared to traditional input devices.

- Research in this area focuses on developing advanced algorithms for gesture recognition and enhancing the accuracy and responsiveness of gesture-based interactions.

INTRODUCTION

- Air board using hand gestures is a technology that allows users to interact with a digital interface through hand movements.

- Python is a popular programming language used to develop applications that utilize hand gesture recognition.

- In this presentation, we will explore the concept of air board and how it can be implemented using Python.

SOFTWARE & HARDWARE REQUIREMENTS

SOFTWARE REQUIREMENTS:

HARDWARE REQUIREMENTS:

- pycharm
- Cv2 module
- media pipe

 * laptop

EXISTING SYSTEM

• An air board system using hand gestures is a cutting-edge technology that allows users to interact with a virtual interface without physical touch.

• The system utilizes sensors to detect and interpret hand movements, enabling users to navigate, draw, and interact with digital content in a hands-free manner.

• This innovative technology has the potential to revolutionize the way we interact with computers and digital devices, offering a more intuitive and immersive user experience.

EXISTING SYSTEM - DISADVANTAGES

• Limited Accuracy: The existing system for air board using hand gestures often struggles to accurately interpret complex gestures, leading to errors in controlling the board's movements.

• Lack of Customization: Users have limited control over customizing hand gestures to suit their preferences, resulting in a one-size-fits-all approach that may not be optimal for all users.

• Environmental Interference: External factors such as lighting conditions and background movements can interfere with the system's ability to accurately detect and interpret hand gestures, impacting the overall user experience.

PROPOSED SYSTEM

- **Steering**
- Tilt your hand left or right to steer the Airboard in the desired direction.

- **Speed Control**
- Raise or lower your hand to adjust the Airboard's speed, with a simple palm-up or palm-down motion.

- **Braking**
- Extend your hand in front of you to engage the Airboard's braking system and slow down gradually.

PROPOSED SYSTEM - ADVANTAGES

1. **Intuitive Interaction**: Hand gestures provide a natural and intuitive way for users to interact with the airboard. This can make the control process more accessible to a wider range of users, including those who may not be familiar with traditional joystick or remote control interfaces.

2. **Hands-Free Operation**: Unlike traditional controls that require physical input devices, controlling the airboard with hand gestures allows users to operate it hands-free. This can be particularly advantageous in situations where users need to maintain balance or perform other tasks simultaneously.

3. **Enhanced Mobility**: Hand gesture control frees the user from being tethered to a physical controller, allowing for greater mobility and flexibility in controlling the airboard. Users can move more freely while still maintaining control over the device.

THANK YOU