



CONTROLLING POWERPOINT PRESENTATION USING HAND GESTURES

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INTRODUCTION

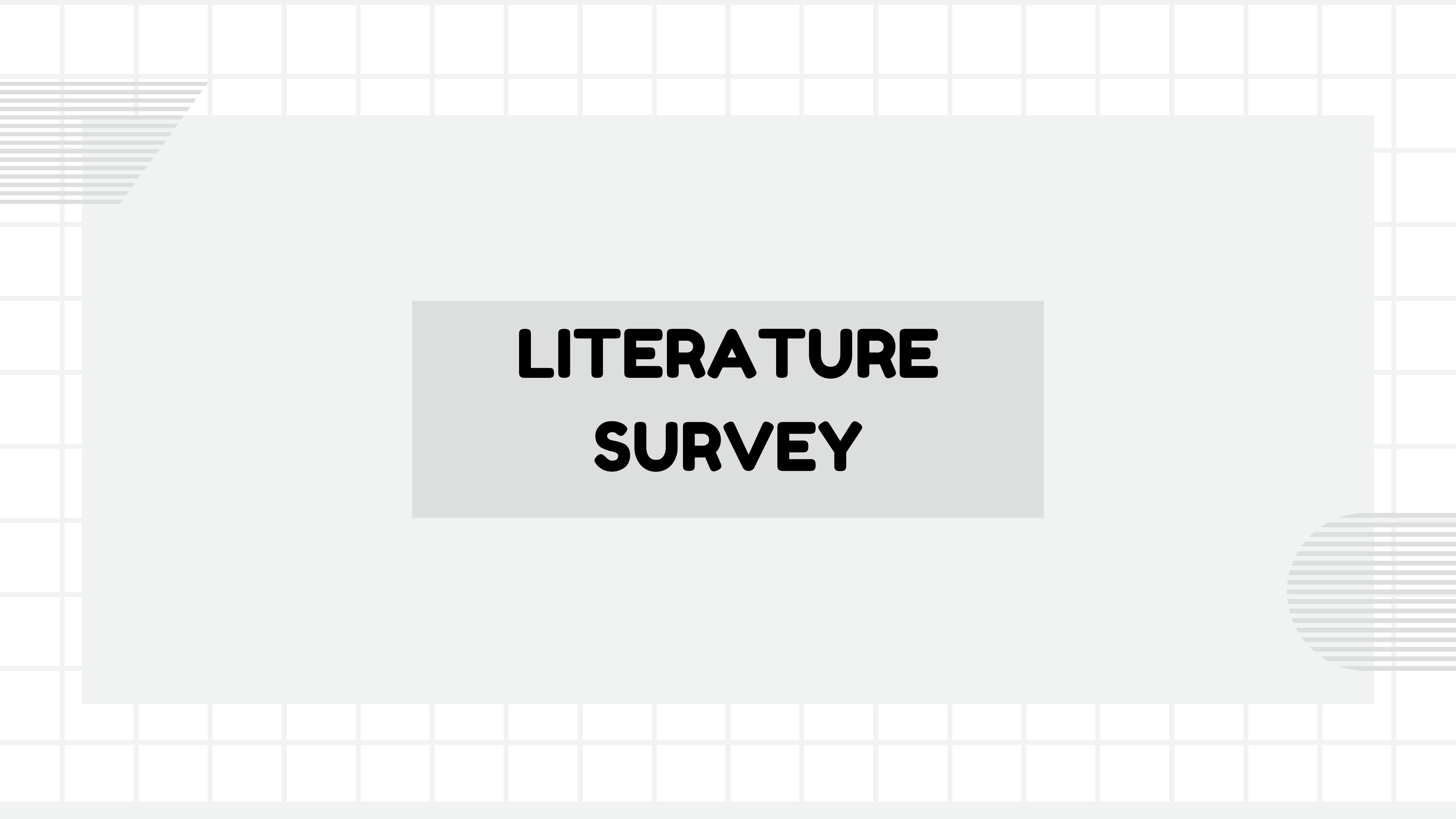
- PowerPoint is like the universal language of presentations, making it easy for you and your audience to follow along.
- It allows integration of text, images, illustrations, audio, video, and charts, fostering dynamic presentations.
- The visual structure facilitates comprehension and audience interest.
- Reliance on mouse, keyboard, or remote restricts movement and confines the presenter to a specific location.



OBJECTIVE

- To develop a cost-effective, touchless hand gesture recognition (HGR) system using a standard laptop camera for controlling and interacting with PowerPoint presentations.
- Enhance presenter mobility
- Improve audience engagement
- Provide a cost-effective solution





LITERATURE SURVEY

(1) DEVELOPMENT OF A REAL TIME VISION-BASED HAND GESTURE RECOGNITION SYSTEM FOR HUMAN-COMPUTER INTERACTION (2023)

Arijit Das; Kaulik Maitra; Shayan Roy; Biswarup Ganguly; Meghna Sengupta; Shreya Biswas

- Focus on real-time hand gesture recognition for human-computer interaction.
- Utilizes American Sign Language dataset and YOLO-v5 algorithm model.
- Uses 700 sign language images in experiment

(2) MARKER-ENHANCED HAND TRACKING WITH DEEP LEARNING (2022)

Donghao Yang; Xian Cao; Yazui Liu; Shuhong Xu

- Hand tracking method with markers and multiple RGB cameras.
- CNN predicts hand joint positions for marker labeling.
- Image restoration algorithm for high accuracy hand joint prediction.


(3)IMAGE PROCESSING TECHNOLOGY BASED ON COMPUTER VISION ALGORITHM(2022)

Mengxia Fan; Yunna Liu

- Discusses image processing technology based on computer vision algorithm.
- Highlights stereo matching in binocular vision and its applications.
- Emphasizes the use of deep learning in stereo matching algorithms.




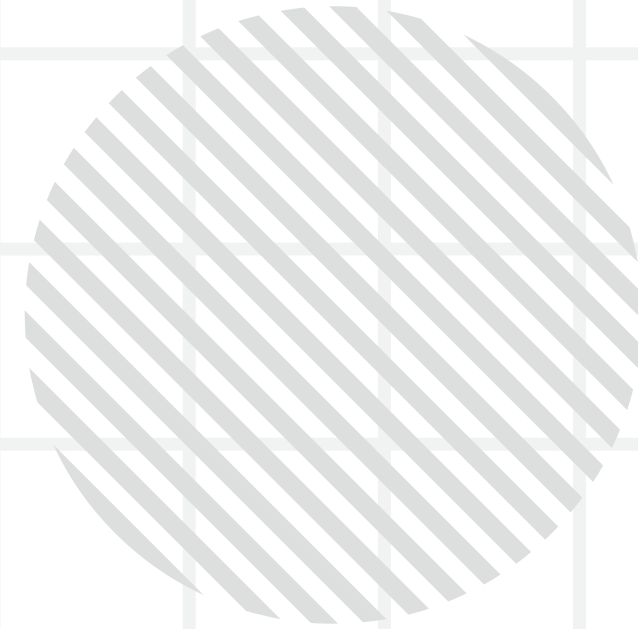
TECHNOLOGIES USED

- **OpenCV:** For image capturing and processing.
 - **MediaPipe:** For advanced hand tracking and gesture recognition.
 - **PyAutoGUI:** To simulate keyboard presses to control PowerPoint.
 - **Django:** For building the web interface.
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CONCLUSION

- **Enhanced Engagement:** Hand gestures create a dynamic and interactive environment, captivating the audience's attention and fostering participation.
 - **Increased Accessibility:** The system can be a valuable tool for users with limitations in using physical controls, promoting inclusivity in presentations.
 - **Improved Efficiency:** Navigating slides through gestures can streamline the presentation flow, allowing presenters to focus on delivering their message.
 - **Intuitive Control:** The use of natural hand gestures provides a user-friendly experience, reducing reliance on memorizing keyboard shortcuts.
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THANK YOU

