NITTE (Deemed to be University) | NMAM INSTITUTE OF TECHNOLOGY

COMPUTER VISION AND CONTROL

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INTRODUCTION

- Developing a computer program that simulates and processes human movement or movements occuring in the nature
- Built using machine learning algorithms that analyze user’s movements and understand the user's message
- The system analyses the movement and then triggers certain action assigned to it

OBJECTIVES

- To develop a program capable of detecting certain objects and their movement and replicate human visual system
- To make human computer interaction more interesting and easy

Ravula Samatha Rani et al[1] proposed on Computer Vision Towards Data Science

->Consists of developing methods that attempt to reproduce the capability of human vision and the technique behind the computer vision using data science

-> With massive data inputs, computer vision systems can now detect more objects per image with better accuracy and precision.

Qingwun Ma et al[2] proposed Recognizing Required Items Based on opencv and Machine Learning

- Focuses on using AI to automatically identify mandatory items of passenger health forms filled in by individuals. It aims to increase efficiency and save time for customs staff.
- OpenCV is an open-source library that supports multiple platforms and can run on different systems. The library has more than 500 functions and can be used in all fields of computer vision.
- Machine learning is an important subject that involves mathematical subjects such as statistics, probability theory, and algorithm complexity theory. It has been applied in many fields such as data mining, computer vision, search engine, medical diagnosis, and robotics. The research in this field has mainly focused on object-oriented tasks, model recognition and simulation, and theoretical analysis of algorithms and application scenarios

J Rajashekhar at el[3] on Moving Object Detection Using Machine Learning

- Focused on machine learning in object detection security. The detection of moving objects in videos and video surveillance, which are both significant and difficult tasks in many computer vision applications, are covered in this chapter\'s review and systematic investigation. Detection algorithms for humans, cars, threats, and security, for example.

- One of the most difficult research topics in computer vision right now is video surveillance in dynamic environments, especially for people, vehicles, and specific objects in cases of security. This technology is essential to the fight against terrorism, crime, and public safety, as well as for the effective management of accidents and the crime that is seen happening these days. The concept of real-time computing task implementation in video surveillance systems is also presented in the study. In this review study, numerous systems are evaluated in order to determine how well they can track moving objects in an indoor or outdoor area in real time.

PROBLEM STATEMENT

- To trigger certain actions upon the movement of specified object,colour,hand gesture etc without any manual input.

CONCLUSION

Computer vision and control plays a very important role in AI,VR sector to help all user and gamers who are involved in interactive activities continuosly with the system

Thank You