iJRASET
International Journal For Research in Applied Science and Engineering Technology

INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

Volume: 10 **Issue:** V **Month of publication:** May 2022

DOI: https://doi.org/10.22214/ijraset.2022.42820

www.ijraset.com

Call: 08813907089 | E-mail ID: ijraset@gmail.com

International Journal for Research in Applied Science & Engineering Technology (IJRASET)
ISSN: 2321-9653; IC Value: 45.98; SJ Impact Factor: 7.538
Volume 10 Issue V May 2022- Available at www.ijraset.com

Real-Time Object Detection Using Deep Learning

Baljeet Singh[1], Nitin Kumar[2], Irshad Ahmed[3], Karun Yadav[4]
[1, 2, 3, 4]*Raj Kumar Goel Institute of Technology, Ghaziabad*

***Abstract:** The computer vision field known as real-time acquisition is large, dynamic, and complex. Local image process refers to the acquisition of one object in an image, while Objects refers to the acquisition of multiple objects in an image. In digital photos and videos, this sees semantic class objects. Tracking features, video surveilance, pedestrian detection, census, self-driving cars, face recognition, sports tracking, and many other applications used to find real-time object. Convolution Neural Networks is an in-depth study tool for OpenCV (Opensource Computer Vision), a set of basic computer-assisted programming tasks. Computer visualization, in-depth study, and convolutional neural networks are some of the words used in this paper..*

I. INTRODUCTION

The goal of the acquisition is to identify and locate all known objects in the scene. Restoration of 3D space, preferably 3D space, is essential for robotic control systems. Improving technology and making robots autonomous and robotic has long been an ongoing desire for technology in humanity. Our aiml is to send normal, uninteresting, or dangerous activities to robots so that people can devote their time to additional works of art. Unfortunately, it looks like smart thing is still behind. In fact, in order to achieve this goal, we will need software that will allow robots to operate and behave independently, in addition to hardware upgrades. Vision, along with other forms of intelligence such as reading and thinking, is one of the most important aspects of this. If a robot cannot see or hear, it cannot be very intelligent.

II. LITERATURE SURVEY

In various fields, there is a need to identify the target object and track it effectively while holding the lock and other complexes installed. Many researchers (Almeida and Guting 2004, Hsiao-Ping Tsai 2011, Nicolas Papadakis and the Aure lie Bureau 2010) have tried different approaches to tracking an object. The strategic environment largely depends on the domain of the application. Some of the research activities that make the variation of the proposed activity in the field of object tracking are illustrated as follows.

III. PROPOSED METHODOLOGY

The need for extensive exploration work to construct the authenticity of the given responses to a particular issue reflects the computer-assisted image process. The large amount of testing and evaluation that goes into the design of image process frames is an important feature hidden within the system. Before settling on a good solution, it is culturally important. This token indicates that the token owner is the token owner. The ability to develop methods and fast modeling programs that hopefully plays an important role in many situations. to help reduce costs and the time it takes to get to a work framework

IV. METHODOLOGY

Deep learning is a form of machine learning. Teaches a computer to learn how to predict and classify information through manual filters. Photos, writing, and music can all be used to highlight a comment. The way the human brain processes information is a source of inspiration for deep learning. Its purpose is to produce real magic by mimicking the workings of the human brain. There are about 100 billion neurons in the human brain. Each neuron is connected to about 100,000 other neurons. We are re-creating it, but in a way and at a level that machines can understand. A neuron has a body, dendrites, and axons in our brain. The signal from a single neuron drops through an axon to the dendrites of the next neuron. A synapse is a connection where a signal travels.

V. PROJECT SCOPE

Blind people can live normal lives and have their own way of doing things. However, they are experiencing difficulties due to inaccessible infrastructure and social issues. For the blind, the most difficult task is to communicate. It is difficult to travel around places, especially for someone who has completely lost his sight. Clearly, blindness is a problem. People can move around easily in their homes without help because they know their surroundings. accommodation Blind people have difficulty finding things in their area. As a result, we have made the decision to create a REAL-OWN ITEM. We are interested in this project as we have passed it. There are only a few papers in this category. As a result, we are strongly motivated to build an object recognition system in real-time setting

VI. CONCLUSION

Through this thesis and based on experimental results we are able to see objects more accurately and identify individual objects by the exact location of the object in the image at x, and the y axis. This paper also provides test results for different methods of acquisition and identification and compares each method for its effectiveness.

VII. FUTURE WORK

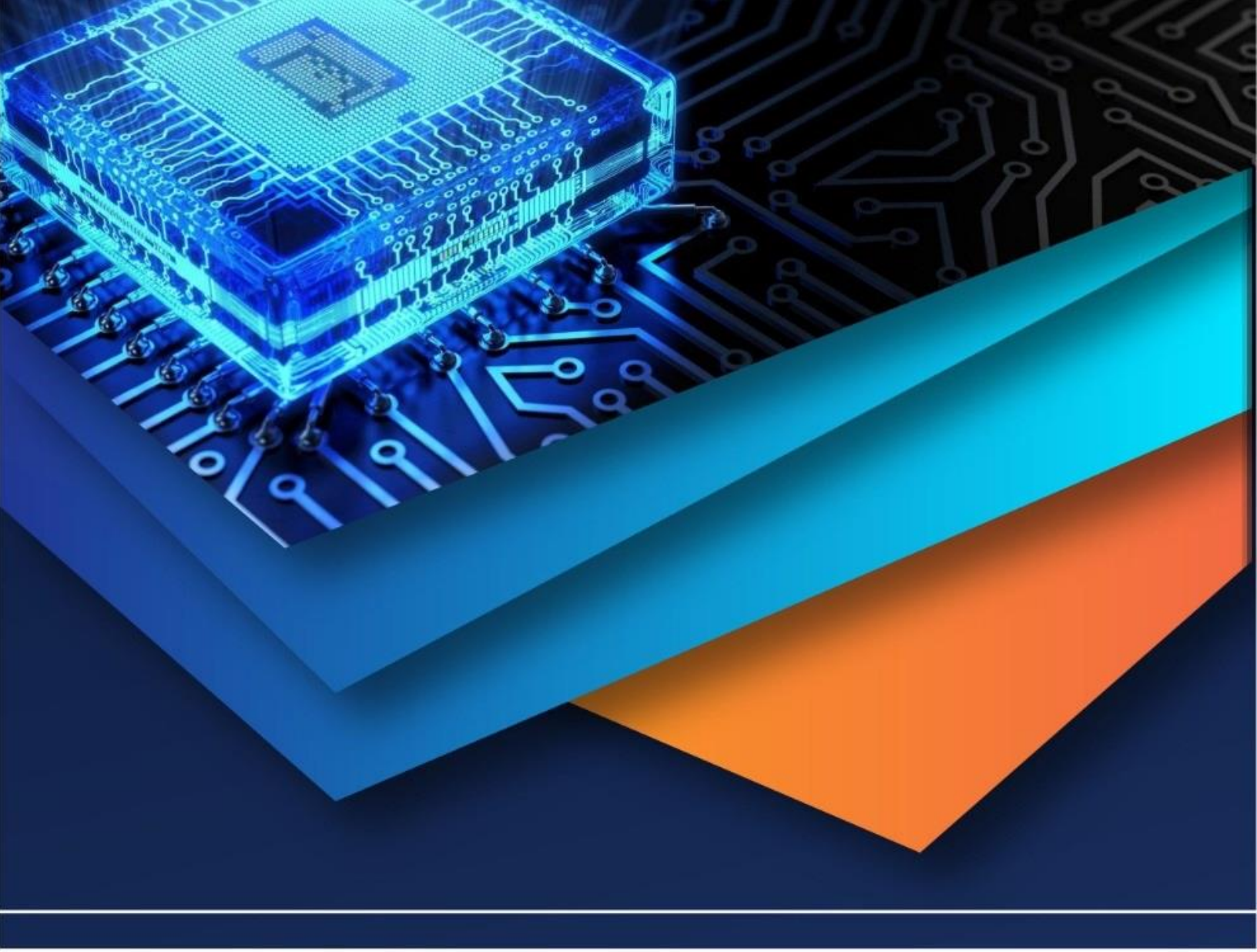
Object recognition system can be used in place of surveillance systems, face recognition, error detection, character recognition, etc. The purpose of this thesis is to develop an object recognition system to detect 2D and 3D objects in an image.

VIII. ACKNOWLEDGEMENT

This study was supported by "Dolphin Labs". We would like to thank Prof. Mahajan for his guidance and expertise in the research

REFERENCES

[1] Agarwal, S., Awan, A., and Roth, D. (2004). Learning to detect objects in images via a sparse, part-based representation. IEEETrans. Pattern Anal. Mach. Intell. 26,1475–1490. doi:10.1109/TPAMI.2004.108
[2] Alexe, B., Deselaers, T., and Ferrari, V. (2010). “What is an object?,” in ComputerVision and Pattern Recognition (CVPR), 2010 IEEE Conference on (San Francisco, CA: IEEE), 73–80. doi:10.1109/CVPR.2010.5540226
[3] Aloimonos, J., Weiss, I., and Bandyopadhyay, A. (1988). Active vision. Int. J.Comput. Vis. 1333–356.doi:10.1007/BF00133571
[4] Andreopoulos, A., and Tsotsos, J. K. (2013). 50 years of object recognition: directions forward. Comput. Vis. Image Underst. 117, 827–891. doi:10.1016/j.cviu.2013.04.005
[5] Azizpour, H., and Laptev, I. (2012). “Object detection using strongly-supervised formable part models,” in Computer Vision-ECCV 2012 (Florence: Springer), 836–849



10.22214/IJRASET

45.98

IMPACT FACTOR: 7.129

IMPACT FACTOR: 7.429

INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY