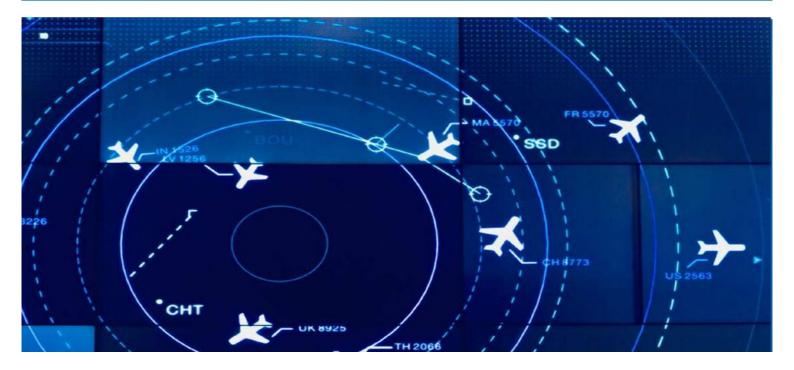


# CNN Models

# **Robust Techniques for Target Detection**

Dr. Sudhir Kumar Chaturvedi



# CNN Models: Robust Techniques for Target Detection

**First Edition** 

Author

Dr. Sudhir Kumar Chaturvedi



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#### Abstract

Object detection is a crucial task for drones, as it enables them to identify and track targets in real-time. However, detecting objects from drones is challenging due to instability, low resolution, and other factors. This project aimed to develop machine learning algorithms to enhance the object detection capabilities of drones.

The project used a raw dataset of images of drones and birds from Kaggle to train the machine learning algorithm. The images were labeled to prepare the dataset, and the algorithm was trained to detect the presence of birds and drones in the images. The final model achieved an accuracy of 85% and could identify targets in real-time, along with bounding boxes, machine learning model developed in this project has significant implications for the drone industry. By improving the object detection capabilities of drones, it can help both commercial and defense industries to identify different objects like people, cars, weapons, birds, and enemy drones.

The implementation of machine learning for object detection in drones can make them more multifunctional, fast, and efficient. This can help in various applications, such as surveillance, agriculture, and wildlife monitoring.

This project demonstrates the potential of machine learning for enhancing the object detection capabilities of drones. By developing more accurate and effective models, drones can quickly and efficiently identify targets, which can have significant benefits in various industries.

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"In the end, I would like to acknowledge Lord Shri Krsna, my parents, my wife and my daughters. Without their support, this work would not have been possible"

Dr. Sudhir Kumar Chaturvedi

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