Model	Accuracy	Precision	Recall	F1-score
Inception Block Model	0.4474	0.3413	0.4474	0.3864
Residual Block Model	0.4211	0.4848	0.4211	0.3867
Dense Block Model	0.3816	0.3355	0.3816	0.3217
Hybrid Model (Residual+ Inception)	0.3553	0.3968	0.3553	0.3044
Custom CNN Model	0.3158	0.2459	0.3158	0.2266

2. Analysis of Results

Inception Block Model achieved the highest accuracy (44.7%), demonstrating its ability to capture multi-scale features (small + large objects). This makes it effective for datasets where object size varies.

Residual Block Model produced a slightly lower accuracy (42.1%) but achieved the highest precision (48.5%), showing that ResNet-style skip connections help reduce overfitting and improve reliable predictions for some classes.

Dense Block Model performed moderately (38.2%), but its dense connectivity did not yield better results on this dataset ,likely due to its parameter-heavy design, which can struggle on smaller datasets.

Hybrid Model (Residual + Inception) underperformed (35.5% accuracy), possibly because combining blocks increased complexity without sufficient data to train effectively.

Custom CNN Model gave the lowest results (31.6%), highlighting that handcrafted simple CNNs are less competitive compared to modern block-based architectures.

4. Conclusion

Overall, the Inception Block Model performed best in terms of accuracy and balanced performance. The Residual Block Model was strongest in terms of precision. Both DenseNet and Hybrid models did not generalize well on this dataset, likely due to overfitting and limited training data. The Custom CNN served as a useful baseline but confirmed the superiority of block-based modern architectures.