

REFERENCES

- Tariq, M., & Javed, A. (2025). *Small Object Detection with YOLO: A Performance Analysis Across Model Versions and Hardware* arXiv preprint arXiv:2504.09900. <https://arxiv.org/abs/2504.09900>
- Sordo L, Breheny C, Halls V, Cotter A, Tørnqvist-Johnsen C, Caney SMA, Gunn-Moore DA. Prevalence of Disease and Age-Related Behavioural Changes in Cats: Past and Present. *Vet Sci*. 2020 Jul 6;7(3):85. doi: 10.3390/vetsci7030085. PMID: 32640581; PMCID: PMC7557453.
- Chen, Rung-Ching, et al. "Monitoring the Behaviours of Pet Cat Based on YOLO Model and Raspberry Pi." *International Journal of Applied Science and Engineering*, vol. 18, no. 5, 2021, pp. 1–12. [https://doi.org/10.6703/ijase.202109_18\(5\).016](https://doi.org/10.6703/ijase.202109_18(5).016)
- Mehendale, Ninad. "Object Detection Using ESP 32 CAM." *SSRN Electronic Journal*, 2022. <https://doi.org/10.2139/ssrn.4152378>.
- Lumbreras Navarro, Raúl. "Analysis of Pet Behaviour Using Computer Vision." *Upcommons.upc.edu*, 29 June 2022. <https://upcommons.upc.edu/handle/2117>
- Mittal, Naman, et al. "Object Detection and Classification Using Yolo"
- Agüero, Kimberly. "Cal Poly Computer Engineering Senior Project Pet Food Monitor Using Raspberry Pi." Advisor: Professor Andrew Danowitz, 2016.
- Fahad, Engr. "ESP32 CAM with Python OpenCV Yolo V3 for Object Detection and Identification." *Electronic Clinic*, May 31, 2023. <https://www.electronicclinic.com/esp32-cam-with-python-opencv-yolo-v3-for-object-detection-and-identification/>.
- Eagan, B. H., Lyons, J., Komogortsev, O. V., & Gruen, M. E. (2023). Multi-Cat Monitoring System Based on Concept Drift Adaptive Deep Learning Model. *Sensors*, 23(21), 8852. <https://doi.org/10.3390/s23218852>
- Liu, W., Anguelov, D., Erhan, D., Szegedy, C., Reed, S., Fu, C.-Y., & Berg, A. C. (2016). SSD: Single Shot MultiBox Detector. In *European Conference on*

- Computer Vision (ECCV), 21–37. https://doi.org/10.1007/978-3-319-46448-0_2
- Ren, S., He, K., Girshick, R., & Sun, J. (2015). Faster R-CNN: Towards Real-Time Object Detection with Region Proposal Networks. In *Advances in Neural Information Processing Systems (NeurIPS)*, 91–99. <https://arxiv.org/abs/1506.01497>
- Huang, J., Rathod, V., Sun, C., Zhu, M., Korattikara, A., Fathi, A., ... & Murphy, K. (2017). Speed/accuracy trade-offs for modern convolutional object detectors. In *Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 7310–7311. <https://doi.org/10.1109/CVPR.2017.351>
- Huang, J., Rathod, V., Sun, C., Korattikara, A., Fathi, A., Fischer, I., ... & Murphy, K. (2016). TensorFlow Object Detection API. arXiv preprint arXiv:1611.10012. <https://arxiv.org/abs/1611.10012>
- Howard, A. G., Zhu, M., Chen, B., Kalenichenko, D., Wang, W., Weyand, T., ... & Adam, H. (2017). MobileNets: Efficient Convolutional Neural Networks for Mobile Vision Applications. arXiv preprint arXiv:1704.04861. <https://arxiv.org/abs/1704.04861>
- Carion, N., Massa, F., Synnaeve, G., Usunier, N., Kirillov, A., & Zagoruyko, S. (2020). End-to-End Object Detection with Transformers. In *European Conference on Computer Vision (ECCV)*, 213–229. https://doi.org/10.1007/978-3-030-58452-8_13
- Bochkovskiy, A., Wang, C.-Y., & Liao, H.-Y. M. (2020). YOLOv4: Optimal Speed and Accuracy of Object Detection. arXiv preprint arXiv:2004.10934. <https://arxiv.org/abs/2004.10934>
- Han, S., Pool, J., Tran, J., & Dally, W. (2015). Learning both Weights and Connections for Efficient Neural Networks. In *Advances in Neural Information Processing Systems (NeurIPS)*, 1135–1143. <https://arxiv.org/abs/1506.02626>
- J. Oduor, “Car Parking Occupancy Detection Using Edge Impulse FOMO,” *Edge Impulse Blog* (2022)

S. Putranto et al., “Tiny machine learning empowers climbing inspection robots for real-time multiobject bolt-defect detection,” Eng. Appl. AI (2024)

Tamura, J., Itaya, Y., Hayashi, K., & Yamamoto, K. (2025). “Statistical inference of the Matthews correlation coefficient for multiclass classification” (arXiv preprint arXiv:2503.06450). arXiv. <https://arxiv.org/abs/2503.06450>