(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :06/08/2024

(21) Application No.202441059366 A
(43) Publication Date : 09/08/2024

(54) Title of the invention : AUTOMATIC VIDEO OBJECT DETECTION SYSTEM USING YOLOV8

(51) International classification :A01K0029000000, G06V0010820000, G06Q0050020000, G06N0020000000, G06T0007000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Animal farming is a critical component of the global food supply chain, providing essential resources such as meat, dairy, and eggs. Ensuring the health and well-being of farm animals is of paramount importance for both ethical and economic reasons. Object detection, a subfield of computer vision and artificial intelligence, has emerged as a valuable tool in modern animal farming practices. Object detection involves the identification and localization of specific objects within images or video streams. In the context of animal farming, these objects can include individual animals, feeders, water troughs, and equipment. By employing computer vision and machine learning algorithms, object detection can offer numerous benefits to farmers and the agricultural industry as a whole. This abstract presents a novel approach to object detection for animal farming using YOLOv8, an advanced deep learning model. The benefits of implementing YOLOv8 for object detection in animal farming are numerous. It enables farmers to automate labor-intensive tasks, optimize resource allocation, and improve animal welfare by monitoring their health and behavior in real-time. Furthermore, the system can be integrated with other farm management tools, providing a comprehensive solution for modern animal farming. The proposed method achieves an accuracy of 98.8% and 99.8% to detect animals.

No. of Pages : 8 No. of Claims : 4