

CSE424  
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Task 2

**Paper Title: A Review of Deep Learning Algorithms for Computer Vision Systems in Livestock**

PaperLink:

<https://drive.google.com/file/d/1sgjUqkY62Tbig41aXvJuPjS55O-4781d/view?usp=sharing>

**Summaury:**

This PDF file provides a review of the latest advancements in computer vision systems for livestock using deep learning algorithms. The article discusses the main deep learning algorithms used for image analyses in tasks such as image classification, object detection, image segmentation, and feature extraction. The review highlights the potential of deep learning algorithms to predict animal-level phenotype and improve livestock management practices. The article also notes that the number of studies using deep learning in computer vision systems for livestock is still small and recent, with swine being the most frequent species studied. The authors declare no conflict of interest.

**Limitations:**

The limitations of the review article on deep learning algorithms for computer vision systems in livestock include the relatively small number of studies using deep learning in this context, with the majority of publications being from 2019 and 2020. Additionally, the article notes that only a few publications fully describe the deep learning algorithms and their implementation, which may limit the comprehensive understanding of these techniques . Furthermore, the review acknowledges that information regarding hyperparameter tuning, pre-trained weights, deep learning backbone, and hierarchical data structure is often missing from the literature . These limitations suggest a need for further research and comprehensive reporting of deep learning algorithms in the context of livestock computer vision systems.

**Synthesis:**

In summary, the PDF file provides a comprehensive review of the latest advancements in computer vision systems for livestock using deep learning algorithms. The review highlights the potential of deep learning algorithms to predict animal-level phenotype and improve livestock management practices. However, the review also notes the limitations of the current literature, including the relatively small number of studies using deep learning in this context and the lack of comprehensive reporting of deep learning algorithms. These limitations suggest a need for further research and comprehensive reporting of deep learning algorithms in the context of livestock computer vision

systems. Overall, the PDF file provides valuable insights into the potential of deep learning algorithms in livestock management and highlights the need for further research in this area.