# Article information:

Frontiers | Automatic detection of sow posture and estrus based on convolutional neural network
<https://www.frontiersin.org/articles/10.3389/fphy.2022.1037129/full>

# Article summary:

1. This article proposes an automatic estrus detection method based on a lightweight convolutional neural network (CNN) for sows.

2. The model is composed of four modules: the input module, the backbone module, the neck module, and the prediction module.

3. The performance evaluation indicators of the sow posture classification model include model size, precision, recall, f1score, detection speed, and parameters.

# Article rating:

May be slightly imbalanced: The article presents the information in a generally reliable way, but there are minor points of consideration that could be explored further or claims that are not fully backed by appropriate evidence. Some perspectives may also be omitted, and you are encouraged to use the research topics section to explore the topic further.

# Article analysis:

The article “Automatic Detection of Sow Posture and Estrus Based on Convolutional Neural Network” is a well-written piece that provides an overview of current research into using CNNs to detect estrus in sows. The authors provide a comprehensive description of their proposed method and its components as well as a detailed analysis of its performance evaluation indicators.

The article is generally reliable and trustworthy in its presentation of information. It provides evidence for its claims by citing relevant studies and providing detailed descriptions of the methods used in this study. Furthermore, it presents both sides equally by discussing both traditional methods such as boar visits or bionic boars as well as newer methods such as accelerometers or infra-red sensors for detecting estrus in sows.

However, there are some potential biases present in the article that should be noted. For example, while the authors discuss various traditional methods for detecting estrus in sows, they do not explore any potential counterarguments to their proposed method or discuss any possible risks associated with using CNNs for this purpose. Additionally, while they provide evidence for their claims by citing relevant studies, they do not provide any evidence to support their claim that their proposed method is more effective than existing methods. Finally, there is no mention of any promotional content or partiality present in the article which could indicate bias towards one particular method over another.

In conclusion, overall this article is reliable and trustworthy in its presentation of information regarding automatic detection of sow posture and estrus based on convolutional neural networks (CNNs). However, there are some potential biases present that should be noted such as lack of exploration into counterarguments or risks associated with using CNNs for this purpose as well as lack of evidence to support claims about effectiveness compared to existing methods.

# Topics for further research:

* Risks associated with using convolutional neural networks
* Comparison of traditional methods for detecting estrus in sows
* Advantages of using accelerometers or infra-red sensors
* Potential counterarguments to automatic detection of sow posture and estrus
* Promotional content or partiality in automatic detection of sow posture and estrus
* Evidence for effectiveness of convolutional neural networks for estrus detection

# Report location:

<https://www.fullpicture.app/item/aefde716d74a858f23e2cfeae437fe9a>