
[JADS] #1099 - Round 1 Review Decision

JADS Editor <editor@bright-journal.org>

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To: Wongpanya.nu@up.ac.th, Jirasak.Au@up.ac.th, Thanapoom.Ka@up.ac.th, Kuljira.Nu@up.ac.th, Kaewpanya.Nu@up.ac.th, pratya.nu@up.ac.th



Dear Dr. Pratya NUANKAEW,

We are writing to inform you that your paper, entitled **"A Practical YOLO Approach to Classifying Thai Freshwater Snails of Economic Significance"** submitted with the identification number **#1099**, has successfully completed a rigorous double-blind review process by the esteemed Journal of Applied Data Sciences (JADS) Peer Review. Please accept our sincere appreciation for your contribution to the field of data sciences through your submission. We are pleased to inform you that your manuscript is **Revision Required**. To facilitate this process, we kindly request that you carefully review the comments and suggestions provided by the reviewers. You are given a period of **7 days to finalize the revisions (otherwise your submission process will be postponed)** and ensure that the concerns raised are adequately addressed. The successful completion of these revisions will greatly contribute to the editorial decision-making process.

Upon receipt of your revised paper, our team will require approximately 2-7 days to thoroughly assess the modifications made. Subsequently, you will be promptly notified of the next decision regarding your manuscript. We advise you to focus on verifying the accuracy of metadata and ensuring the completeness of the revisions in order to minimize the likelihood of re-entering the review stage. We would like to extend our gratitude once again for choosing the Journal of Applied Data Sciences (JADS) as the venue for your scholarly work. Should you require any assistance or guidance during the revision or resubmission process, please do not hesitate to reach out to us. Our team is dedicated to providing the necessary support to facilitate a smooth and successful publication experience for you.

Thank you for your cooperation, and we look forward to the potential publication of your paper in the Journal of Applied Data Sciences (JADS).

Sincerely,

Ibrahiem M. M. El Emary
Editor-in-Chief
Journal of Applied Data Sciences (JADS)
Email: editor@bright-journal.org

----- - IMPORTANT - -----

----- - Content Writing - -----

Abstract: Please craft a concise abstract within a 250 to 300 word limit. Summarize the contributions, ideas, findings, or results of your paper and discuss their implications. Do not include abbreviations, footnotes, references, mathematical equations, diagrams, or tables. We suggest structuring your abstract as follows:

1. Clearly state the primary objective of your paper.
2. Highlight the virtues or contributions of your research.
3. Provide a conceptual description of your methodology.
4. Describe the research figure, tables and procedures employed, such as simulation, experimentation, or survey methods.
5. If the figure or table is in a non-English language, please provide a translated version of the table or a detailed explanation.
6. Present the main outcomes or results of your study, along with any relevant conclusions.
7. If applicable, discuss the implications of your findings for future research or practical applications.

Please note that this journal exclusively publishes high-quality papers. A high-quality paper should include the following elements:

1. A well-defined statement of the problem being addressed.
2. Proposed solution(s) to the problem.
3. Obtained results, accompanied by a clear description of any previous work on the topic and the novelty of your research.

Ensure that your discussion section is appropriate. In the "Results and Discussion" section, emphasize the most significant findings and provide a thorough analysis of the results.

The title of your paper should succinctly summarize the main ideas of your study. It should serve as a comprehensive and descriptive representation of your research. Use abbreviations and acronyms sparingly unless they are widely recognized.

SUBMISSION: #1099

TITLE: A Practical YOLO Approach to Classifying Thai Freshwater Snails of Economic Significance

REVIEW 1

Overall evaluation

Decision: Revision Required

Comment:

The abstract claims YOLOv11-nano achieved the best overall performance, yet the "Discussion" section later states that YOLOv9-tiny had the highest accuracy. This inconsistency between the abstract and discussion needs clarification regarding which metric defines "best overall performance."

The study states it uses YOLOv8, YOLOv9-tiny, and YOLOv11-nano, but the source [19] is repeatedly cited to support technical details for all three. However, source [19] is a review paper on YOLOv8–YOLOv11, not empirical performance data of these models on freshwater snails. This undermines the evidentiary basis for model comparisons.

In the Introduction, the claim that snails are used in processed meat and shell calcium products lacks specificity. It would benefit from quantifiable examples or industry references showing how widespread and economically significant these value-added uses are.

The paper frequently refers to "Pomacea spp." and "Pomacea canaliculata" as separate classes. Since "Pomacea spp." includes *P. canaliculata*, the rationale for separating them into distinct classes without genetic confirmation or clear visual distinctions is questionable and should be justified.

The data augmentation section mentions standard YOLO techniques such as flipping and rotation, but it doesn't explain why certain augmentations (e.g., mud/water overlays, lighting variation) that are more reflective of real-world farming conditions were not implemented despite being emphasized earlier in the literature review.

The claim that the YOLOv11-nano model has the slowest training time yet fastest inference time is counterintuitive and requires elaboration. Typically, such a model would be both fast to train and infer due to its size. A comparative graph or breakdown would aid clarity.

REVIEW 2

Overall evaluation

Decision: Revision Required

Comment:

The discussion on misclassification between *Bellamya sp.* and *Bellamya reticulata* lacks sufficient exploration into whether feature extraction or labeling inconsistencies contribute to this issue. Including confusion matrices or Grad-CAM visualizations would support this analysis.

Despite multiple references to "explainability" and farmer-facing tools in the conceptual system design, there is no implementation or prototype of an explainable interface provided. This undermines the claim that the system is prepared for real-world deployment.

The study does not provide confidence intervals or statistical significance for performance metrics like mAP or recall, which are crucial for asserting superiority of one model over another, especially given their close values.

While the dataset consists of 4,610 images, the paper does not indicate whether class imbalance was a concern, particularly since *Pilsbryconcha lewisi* only has 391 images. If oversampling or weighting was not applied, evaluation results may be biased.

The paper claims YOLOv11-nano is most suitable for edge devices, yet it also reports it required the longest training time (up to 1,400 seconds/epoch). This contradiction is not resolved, nor is its practicality explained in terms of hardware constraints during deployment.

The Results section includes performance numbers with very high decimal precision (e.g., 0.9800), implying spurious accuracy. Given the small dataset and potential for annotation noise, rounding to three significant digits would be more appropriate.

----- REVIEW 3 -----

----- Overall evaluation -----

Decision: Revision Required

----- Comment:

The “YOLO Model” section redundantly repeats the same descriptions of YOLOv8, v9-tiny, and v11-nano that appear earlier in the Introduction and Literature Review, indicating a lack of consolidation across sections.

Figure 1 is referenced as illustrating the architecture framework, but it is never described or analyzed in detail. If it exists, it should be discussed; if it does not, the reference should be removed or the figure added.

No information is provided on hyperparameter tuning beyond learning rate and batch size. Parameters such as momentum, weight decay, or optimizer type (SGD/Adam) could affect performance but are not mentioned.

The paper proposes a future hybrid verification system using molecular markers but does not describe how such markers would be collected or integrated with the YOLO pipeline. This makes the proposal seem speculative.

The paragraph beginning with “From a system perspective...” in the Introduction seems overly visionary and reads more like a grant application than a research exposition. It lacks connection to the actual model performance or methods applied in this study.

The use of “learning stability” as a justification for recommending YOLOv11-nano lacks a clear operational definition. It would be helpful to define what constitutes “stable learning” in this context (e.g., smooth convergence, low variance loss curves).

Despite citing [10]–[18] for underwater species detection, the paper does not clarify how differences between aquatic vs. non-aquatic detection environments (e.g., reflectivity, occlusion) apply to snails outside water. This may weaken the relevance of those studies.

2 attachments



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