

## COVER LETTER

*Ade Purwanto*  
National Research and Innovation Agency - BRIN  
adep001@brin.go.id  
+62 8170163881

Jakarta, 9 December 2022

Dear Editor,

We wish to submit an original research article entitled "***Image Segmentation in Aerial Imagery; A Review***" for consideration by SINERGI.

We confirm that this work is original and has not been published elsewhere, nor is it currently under consideration for publication elsewhere.

In this paper, we report on / show that:

|                     |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|---------------------|---|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Field               | : | Remote Sensing                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Topic               | : | Image Segmentation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Brief Background    | : | There was no available rigorous review of Image Segmentation focusing in Aerial Imagery                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Research Problem    | : | <ol style="list-style-type: none"><li>1. What are the different approaches used by researchers for aerial image segmentation? What are their limitations?</li><li>2. What are the different techniques used for image pre-processing and feature extraction?</li><li>3. Which techniques are used primarily for aerial image segmentation?</li><li>4. What are the different metrics used for evaluating the performance of the proposed models?</li><li>5. How has Machine Learning-based image segmentation developed over time?</li><li>6. What are the main challenges in implementing Machine Learning techniques in aerial imagery?</li></ol> |
| Overview of Method  | : | The idea is to frame the research questions, then the relevant research publication was searched using various reputable online databases and digital libraries. The accumulated publications were then sorted according to the inclusion and exclusion criteria.                                                                                                                                                                                                                                                                                                                                                                                   |
| Significant finding | : | Machine Learning has gained popularity among segmentation methods, and deep learning has been aggressively put an essential role in it.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

We have no conflicts of interest to disclose.

Thank you for your consideration of this manuscript.

Sincerely,  
Ade Purwanto



TT ELEKTRONIK  
BRIN

---

## AUTHORSHIP STATEMENT

I/We wish to submit an original research article entitled “*Image Segmentation in Aerial Imagery; A Review*” for consideration by SINERGI.

All persons who meet authorship criteria are listed as authors, and all authors certify that they have participated sufficiently in work to take public responsibility for the content, including participation in the concept, design, analysis, writing, or revision of the manuscript.

|                 |                                           |
|-----------------|-------------------------------------------|
| <b>Author 1</b> |                                           |
| Name            | : Ade Purwanto                            |
| Affiliation     | : Badan Riset dan Inovasi Nasional (BRIN) |
| Email Address   | : Adep001@brin.go.id                      |
| <b>Author 2</b> |                                           |
| Name            | : Dewi Habsari Budiarti                   |
| Affiliation     | : Badan Riset dan Inovasi Nasional (BRIN) |
| Email Address   | : dewi037@brin.go.id                      |
| <b>Author 3</b> |                                           |
| Name            | : Fithri Nur Purnamastuti                 |
| Affiliation     | : Badan Riset dan Inovasi Nasional (BRIN) |
| Email Address   | : fith001@brin.go.id                      |
| <b>Author 4</b> |                                           |
| Name            | : Irfansyah Yudhi Tanasa                  |
| Affiliation     | : Badan Riset dan Inovasi Nasional (BRIN) |
| Email Address   | : irfa008@brin.go.id                      |
| <b>Author 5</b> |                                           |
| Name            | : Yomi Guno                               |
| Affiliation     | : Badan Riset dan Inovasi Nasional (BRIN) |
| Email Address   | : yomi001@brin.go.id                      |
| <b>Author 6</b> |                                           |
| Name            | : Aris Surya Yunata                       |
| Affiliation     | : Badan Riset dan Inovasi Nasional (BRIN) |
| Email Address   | : aris018@brin.go.id                      |

|                 |   |                                         |
|-----------------|---|-----------------------------------------|
| <b>Author 7</b> |   |                                         |
| Name            | : | Mukti Wibowo                            |
| Affiliation     | : | Badan Riset dan Inovasi Nasional (BRIN) |
| Email Address   | : | mukt003@brin.go.id                      |
|                 |   |                                         |
|                 |   |                                         |
| <b>Author 8</b> |   |                                         |
| Name            | : | Asyraf Hidayat                          |
| Affiliation     | : | Badan Riset dan Inovasi Nasional (BRIN) |
| Email Address   | : | asya003@brin.go.id                      |
|                 |   |                                         |
|                 |   |                                         |
| <b>Author 9</b> |   |                                         |
| Name            | : | Dede Dirgahayu                          |
| Affiliation     | : | Badan Riset dan Inovasi Nasional (BRIN) |
| Email Address   | : | dede004@brin.go.id                      |
|                 |   |                                         |

## POTENTIAL REVIEWERS

Please submit 3 (three) potential reviewers (*that have not listed in SINERGI*) to speed up the review process that competent for the topic and has a good reputation in that area.

|                   |   |                                                    |
|-------------------|---|----------------------------------------------------|
| <b>Reviewer 1</b> |   |                                                    |
| Name              | : | Prof. Dr. Dony Kushardono                          |
| Affiliation       | : | Aeronautics dan Space Research Organisation - BRIN |
| Email Address     | : | dony001@brin.go.id                                 |
|                   |   |                                                    |
| <b>Reviewer 2</b> |   |                                                    |
| Name              | : | Dr. Soni Darmawan, S.T., M.T.                      |
| Affiliation       | : | ITENAS                                             |
| Email Address     | : | soni_darmawan@itenas.ac.id                         |
|                   |   |                                                    |
| <b>Reviewer 3</b> |   |                                                    |
| Name              | : | Dr. Orbita Roswintiarti, M.Sc.                     |
| Affiliation       | : | Masyarakat Penginderaan Jauh Indonesia (MAPIN)     |
| Email Address     | : | orbi001@brin.go.id                                 |