

Author contributions

Use this form to specify the contribution of each author of your manuscript. A distinction is made between five types of contributions: Conceived and designed the analysis; Collected the data; Contributed data or analysis tools; Performed the analysis; Wrote the paper.

For each author of your manuscript, please indicate the types of contributions the author has made. An author may have made more than one type of contribution. Optionally, for each contribution type, you may specify the contribution of an author in more detail by providing a one-sentence statement in which the contribution is summarized. In the case of an author who contributed to performing the analysis, the author's contribution for instance could be specified in more detail as 'Performed the computer simulations', 'Performed the statistical analysis', or 'Performed the text mining analysis'.

If an author has made a contribution that is not covered by the five pre-defined contribution types, then please choose 'Other contribution' and provide a one-sentence statement summarizing the author's contribution.

Manuscript title: Target Area Georeference Algorithm for Evaluating the Impact of High-Speed Weapon

Author 1: Ardian Infantono

- Conceived and designed the analysis
Ideas; formulation or evolution of overarching research goals and aims
- Collected the data
Collected the data of air-to-ground weapon delivery exercise in Air Weapon Range
- Contributed data or analysis tools
Application of statistical, mathematical, computational, or other formal techniques to analyze or synthesize study data
- Performed the analysis
Performed the computer simulations
- Wrote the paper
Preparation, creation, and/or presentation of the published work by those from the original research group, specifically critical review, commentary, or revision – including pre-or postpublication stages
- Other contribution
Created coding programming languages related to applications, programming, software development; designing computer programs; implementation of the computer code and supporting algorithms; testing of existing code components

Author 2: Ridi Ferdiana

- Conceived and designed the analysis**
Specify contribution in more detail (optional; no more than one sentence)
- Collected the data**
Specify contribution in more detail (optional; no more than one sentence)
- Contributed data or analysis tools**
Application of mathematical, computational techniques to analyze or synthesize study data
- Performed the analysis**
Performed the statistical analysis
- Wrote the paper**
Preparation, creation, and/or presentation of the published work, specifically writing the initial draft (including substantive translation)
- Other contribution**
Oversight and leadership responsibility for the research activity planning and execution, including mentorship external to the core team

Author 3: Rudy Hartanto

- Conceived and designed the analysis**
Specify contribution in more detail (optional; no more than one sentence)
- Collected the data**
Specify contribution in more detail (optional; no more than one sentence)
- Contributed data or analysis tools**
Application of statistical and computational techniques to analyze or synthesize study data
- Performed the analysis**
Specify contribution in more detail (optional; no more than one sentence)
- Wrote the paper**
Specify contribution in more detail (optional; no more than one sentence)
- Other contribution**
Verification, whether as a part of the activity or separate, of the overall replication/ reproducibility of results/experiments and other research outputs