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# COVER LETTER

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Dear,
We wish to submit an original research article entitled "***Indonesia Rupiah Currency Detection For Visually Impaired People Using Transfer Learning VGG-19***" 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. We promise not to withdraw this article after it has been processed by the Editorial Team. If there is a withdrawal, we are willing to pay a penalty of USD 150 (IDR 2000K) to the SINERGI Editorial Team.

In this paper, I/we report on / show that:

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| Field | : | Artificial intelligence, Software Development |
| Topic | : | Rupiah Currency Detection |
| Brief Background | : | Money plays a crucial role in daily life, including transactions for people with visual impairments. Visually impaired individuals often struggle to accurately identify currency, increasing their vulnerability to fraud and transaction errors. Reports indicate a significant rise in suspected counterfeit money circulation between 2023 and early 2024, totaling approximately 192,647 rupiah banknotes. Additionally, around 1.5% of Indonesia's population, approximately 4 million people, suffer from visual impairments, including blindness and low vision. Despite efforts such as the use of blind codes on banknotes, visually impaired individuals still face challenges due to the uniform design and durability issues of these markers. Therefore, there is a growing need for advanced technological solutions, such as computer-based image processing using Convolutional Neural Networks (CNNs) with VGG-19 architecture. These models aim to provide real-time detection of currency denomination and authenticity, incorporating features like |

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| | | audio feedback to assist visually impaired users effectively. |
| Research Problem | : | Implementation of CNN for effective currency detection to assist visually impaired people |
| Overview of Method | : | CNN with VGG-19 Architecture |
| Significant finding | : | the successful implementation of a Convolutional Neural Network (CNN) using the VGG-19 transfer learning model. Creating modifications to the top layers of the VGG-19 model, called fully connected layers. These modifications involve substituting the 3 fully connected layers with dense and flatten layers. Also optimized hyperparameters like epoch, and batch size, achieving an impressive 88% accuracy in classifying 4 classes of Rupiah currency over 50 epochs with a batch size of 32. Additionally, the Mobile App designed for detecting Rupiah banknote authenticity demonstrated rapid response times, within a time range of 459 ms to 592 ms, with an overall average response time of 458 ms. Therefore, this Mobile App can be categorized as having a fast response time. |

We have no conflicts of interest to disclose.

Thank you for your consideration of this manuscript.

Sincerely,

Raissa Alfatikarani

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# AUTHORSHIP STATEMENT

I/We wish to submit an original research article entitled "***Indonesia Rupiah Currency Detection For Visually Impaired People Using Transfer Learning VGG-19***" 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.



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# 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.

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