

IJCSHAI

International Journal  
of Computer Science  
and Humanitarian AI

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**Description**

International Journal of Computer Science and Humanitarian AI (IJCSHAI) is an international journal published biannually in February and October. IJCSHAI will process accreditation to Google Scholar, DOAJ, the Ministry of Research, Technology and Higher Education Republic of Indonesia (SINTA), and SCOPUS. The journal is managed by the Center of Excellence (CoE) in Humanitarian AI and Technology and School of Computer Science, Bina Nusantara University.

**Focus and Scope**

IJCSHAI invites academicians and professionals to write their ideas, concepts, new theories, or science development in the field of Computer Science, Artificial Intelligence (AI), Fuzzy Systems, Expert Systems, Geo-AI, Machine Learning, Deep Learning, Humanitarian AI, Data Science, Computer Vision, Natural Language Processing (NLP), Information Systems, Psychoinformatics, Computational Intelligence, Recommender Systems, Robotics, Robot Vision and Control Systems.

FOREWORD

We express our gratitude for publishing the first volume and issue of the International Journal of Computer Science and Humanitarian AI (IJCSHAI). The release of this edition Vol. 2 No. 1 February 2025 marks an essential step in disseminating the latest knowledge and research in computer science and the application of artificial intelligence for humanitarian purposes. In this edition, the authors present six research articles covering various exciting and relevant topics, including:

1. **Two-Dimensional Segmentation to Reconstruct Three-Dimensional Covid-19 Patient's Lung CT Using Active Contour**—This article COVID-19, which spread since December 2019, has caused more than 4 million cases in Indonesia with a fatality rate of 3.3%. This study used image processing on multi-slice CT scans to quantify lung injury, resulting in an average volume difference of 5% and accuracy of 62% based on IoU.
2. **Systematic Literature Review of The Use of Music Information Retrieval in Music Genre Classification**—This study explores deep learning models like CNNs and RNNs in Music Information Retrieval (MIR) for genre classification. Using a Systematic Literature Review, it highlights the impact of spectral, temporal, and timbral features on accuracy while addressing challenges like dataset quality and model interpretability.
3. **Smoker Melanosis Classification Using Oral Photographic Feature Extraction Based On K-Nearest Neighbor**—This article highlights smoking can cause pathological and physiological abnormalities in the oral cavity, such as smoker melanosis. This study used KNN with image processing features for gingival pigmentation classification, achieving an accuracy of 1.0, but methods such as CNN can improve classification accuracy results.
4. **The Framework of Vehicle Detection and Counting System for Handling of Toll Road Congestion using YOLOv8**—This study develops a vehicle detection and prediction system using YOLOv8 to manage toll road congestion in Jakarta. With 98% accuracy and fast detection (83.6ms), it helps update traffic status and improve intelligent transportation systems (ITS).
5. **A Literature Review on AI and DSS for Resilient and Sustainable Humanitarian Logistics**—This study explores AI and Decision Support Systems (DSS) in humanitarian logistics using a systematic literature review. Findings show AI improves resource allocation, emergency routing, and relief distribution, though challenges like data integration and algorithm reliability remain.
6. **Comparison of Machine Learning Classification Models in Predicting The Titanic Survival Rate**—This study uses machine learning to predict Titanic passenger survival based on demographic and travel attributes, with Random Forest achieving the highest accuracy (0.815) and gender and ticket class identified as key survival factors.

We hope this inaugural edition can make a meaningful contribution to the advancement of science, particularly in the fields of computer science and artificial intelligence. We extend our sincere thanks to everyone who contributed to the publication of this journal, especially the authors, editorial team, and peer reviewers. We hope the articles in this journal prove useful and serve as valuable references for researchers.

Jakarta, February 20<sup>th</sup> 2025

Prof. Dr. Ir. Widodo Budiharto, S.Si., M.Kom., IPM., SMIEEE

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