

# IJCSHAI **International Journal of Computer Science and Humanitarian AI**

**Editor in Chief**

Widodo Budiharto Bina Nusantara University, Indonesia

**Associate Editor**

Anjali Garg	The NorthCap University, Gurugram, Haryana, India
Hemani Kaushal	University of North Florida, United States
Nurhafiza A. Kader Malim	Universiti Sains Malaysia
Patrick Hénaff	Ecole Nationale d'Ingénieurs de Brest, France
Renuka Agrawal	Symbiosis Institute of Technology, Symbiosis International (Deemed University), Pune - India
Sharda Vashisth	The NorthCap University, Gurugram, Haryana - India
Taj Aldeen Naser	Misan University, Iraq
Jarot S. Suroso	Pradita University, Jakarta - Indonesia
Setiawardhana	Politeknik Elektronika Negeri Surabaya (PENS), Indonesia
Tri Arief Sardjono	Institut Teknologi Sepuluh Nopember Surabaya (ITS), Indonesia
Wahyu Setyo Pambudi	Institut Teknologi Adhi Tama Surabaya, Indonesia
Alexander Agung Santoso	Bina Nusantara University, Indonesia
Dina Fitria Murad	Bina Nusantara University, Indonesia
Edy Irwansyah	Bina Nusantara University, Indonesia
Heri Ngarianto	Bina Nusantara University, Indonesia
Maria Loura Christhia	Bina Nusantara University, Indonesia
Sani Muhamad Isa	Bina Nusantara University, Indonesia
Sfenrianto	Bina Nusantara University, Indonesia

**Language and Layout Editor**

Hanis Amalia Saputri Bina Nusantara University, Indonesia

**Secretariat**

Dewi Novianti Bina Nusantara University, Indonesia

**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.

# IJCASHAI

## International Journal of Computer Science and Humanitarian AI

### FOREWORD

We express our gratitude for publishing the first volume and issue of the International Journal of Computer Science and Humanitarian AI (IJCASHAI). The release of this inaugural edition 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. User Requirement Analysis on Sales Information System at PT. MITRA INDOLINK—This article discusses the user requirement analysis of the sales information system at PT. MITRA INDOLINK, which aims to improve efficiency and accuracy in the company's sales process.
2. A Systematic Literature Review: Cyber Attack: Phishing Environments, Techniques, and Detection Mechanism - This research presents a systematic review of cyber-attacks, specifically phishing, along with their techniques and detection mechanisms, which are crucial for enhancing cybersecurity.
3. Development of Telegram-Based Home Automation and Data Acquisition System—This article highlights the development of a Telegram-based home automation system, which enables users to automatically control household devices and efficiently gather data.
4. Implementation of Spatial Constraints in Clustering Algorithms - This study examines the application of spatial constraints in clustering algorithms, which can improve data analysis quality in contexts involving spatial dimensions.
5. Implementation of IoT Edge Computing for Control and Monitoring System of Hydroponic Plant Water Quality Using Raspberry Pi - This article details the implementation of IoT-based edge computing for controlling and monitoring hydroponic plant water quality using Raspberry Pi, offering an innovative solution in modern agriculture.
6. Assessing University Website Performance: A Comparative Analysis Using GTmetrix - This research conducts a performance analysis of university websites using the GTmetrix tool, providing a comparative evaluation that can enhance the user experience in the educational domain.

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, October 12<sup>th</sup> 2024

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

Editor in Chief of IJCASHAI

## TABLE OF CONTENTS

1	<b>Mochamad Naufal Akbar, Deddy Purba Pratama, Kevin Alexander &amp; Suzanna</b> User Requirement Analysis on Sales Information System at PT. MITRA INDOLINK	XX-XX
2	<b>Cindy Natasya, Irvin &amp; Alexander Agung Santoso Gunawan</b> A Systematic Literature Review: Cyber Attack: Phishing Environments, Techniques, and Detection Mechanism	XX-XX
3	<b>Widodo Budiharto &amp; Heri Ngarianto</b> Development of Telegram-Based Home Automation and Data Acquisition System	XX-XX
4	<b>Mohammad Dian Purnama &amp; Moh Jainur Miko Wahyudi</b> Implementation of Spatial Constraints in Clustering Algorithms	XX-XX
5	<b>Rony Baskoro Lukito, Cahya Lukito &amp; Endang Ernawati</b> Implementation of IoT Edge Computing for Control and Monitoring System of Hydroponic Plant Water Quality Using Raspberry Pi	XX-XX
6	<b>Davin Nayaka Pandya, Doddy Suryadharna, Lili Ayu Wulandhari &amp; Islam Nur Alam</b> Assessing University Website Performance: A Comparative Analysis Using Gtmetrix	XX-XX