ASIANComNet CONFERENCE

Conference Dates: 24-27 October 2024

Venue: Bangkok, Thailand

ASIANComNet 2024 CONFERENCE PROCEEDINGS

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ASIANComNet is a leading global event that brings together industry professionals, academics, and representatives from government agencies and other institutions to discuss and exchange information and ideas about advancements in communication and networking technology.

ABOUT THE 2024 CONFERENCE

The 2024 ASIAN CONFERENCE ON COMMUNICATION AND NETWORKS (ASIANComNet 2024) will be held in Bangkok, Thailand from Thursday, 24 October to Sunday, 27 October 2024. The theme of ASIANComNet 2024 is "**THAI (TecHnology And Innovation) for a Smart Planet**". The Conference is aimed at serving as a platform for researchers, Academia, and Industry to share their knowledge across different verticals of Electrical and Computer Science. Also, ASIANComNet shall provide a new forum for world-class researchers togather and share their research achievements, ideas, and progress that is required in solving the future challenges that the Information Communication field faces.

Bringing the Wireless World Together

Thought leaders from across academia, industry, research institutions and government will gather to discuss the current state-of-the-art in wireless as well as its future applications, systems, and technologies. Topics will include:

Track 1: Mobile computing, communications, 5G and beyond

Track 2: IoT and applications

Track 3: Image processing

Track 4: Privacy, Security for Networks

Track 5: Dedicated Technologies for Wireless Networks

Track 6: Emerging Trends of AI/ML

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Convolutional Neural Network and Haversine Formula in Presence System for Easy Attendance

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***Abstract*—As COVID-19 cases continue to rise, minimizing physical contact is essential to curb the virus's spread. IDE LPKIA, an educational institution, currently uses a centralized attendance system based on fingerprint scanning, which increases the physical contact and thus the potential for virus transmission. To address this issue, this research proposes a new attendance system that allows employees to mark their attendance independently using their personal smartphones, eliminating the need for centralized attendance stations. The proposed system integrates facial recognition and location radius technology. Facial recognition is implemented using a convolutional neural network (CNN) to ensure accurate identification, while the Haversine formula is employed to calculate the location radius, ensuring attendance can only be registered within a specific geographic area around the institution. This approach not only reduces physical contact but also prevents attendance fraud, as employees can only check in based on their facial identity and within the defined location radius. This system aims to enhance safety and integrity in attendance tracking amidst the ongoing pandemic.**

***Index Terms*—Face recognition, attendance, convolutional neural network, Haversine formula.**

I. Introduction

Currently, the number of the spread of COVID-19 is increasing, so a system is needed to reduce the spread of COVID-19. One place that is no exception is institutions, likes educational, health, office and government agencies. Therefore, the use of information technology in today's era is so important. Technology that is currently used in various aspects of human life is currently using information technology in everyday life [1]. This is also inseparable from the application of technology in the attendance system A concise and factual abstract is required [2,3].

To further enhance the effectiveness of these technology-driven attendance systems, several key advancements can be incorporated. For instance, implementing contactless biometric systems, such as facial recognition or iris scanning, can streamline the check-in process while minimizing physical contact. Additionally, incorporating real-time health monitoring features, such as temperature checks or symptom reporting, into the attendance system can provide an added layer of precaution. This allows institutions to quickly identify and address potential health risks, thereby preventing potential outbreaks.

Moreover, integrating geo-fencing technology with attendance systems can ensure that individuals are present within designated areas and comply with location-specific health regulations. Data analytics can also play a crucial role by analyzing attendance patterns and detecting anomalies that may indicate potential health concerns or breaches in protocol. These data-driven insights can inform decision-making and help institutions respond proactively to emerging trends.

Overall, the integration of advanced technologies in attendance systems not only enhances operational efficiency but also aligns with public health measures, contributing to a safer and more responsive environment. As the pandemic continues to evolve, ongoing innovation and adaptation of these systems will be essential in supporting institutional resilience and safeguarding public health.

Attendance is an activity that is often carried out almost every day both for employees at work, currently the attendance device used by employees, or the community is quite developed and diverse, such as one of them using fingerprints and so on [4], but it is very unfortunate that the attendance method still has several shortcomings such as hardware damage and being required to make physical contact so that this can be a medium for the spread of COVID-19 [5].

An attendance system is an important factor for a government office or a company to achieve work goals, this is related to discipline which has an impact on the performance of each employee. So, the face recognition system for the attendance system can reduce physical contact and reduce the chances of spreading and adjusting the location when attendance can also be a consideration for not taking attendance outside the reach of an agency.

Convolutional neural network (CNN) is a type of neural network commonly used in image data. CNN can be used to detect and recognize objects in an image. CNN is a technique inspired by the way mammals and humans produce visual perception [6]. Haversine method: The formula of this method is used to calculate the distance between points on the earth's surface using the latitude and longitude as input variables. The Haversine formula is an important equation of navigation, giving the great circle distance between two points on the surface of a sphere (Earth) based on the longitude and latitude.

Based on this, it is necessary to develop the existing Attendance System because several attendance systems in agencies Currently the attendance recording process is still mostly done manually and is considered less effective [7], so in this study

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the attendance recording process will be carried out with face and face recognition [8]. Checking radius from agencies using the android platform which is considered capable of efficient attendance recording time and reducing physical contact so as to reduce the spread of COVID-19.

To address the shortcomings of current attendance systems, this study proposes the implementation of advanced technology that integrates facial recognition and location radius assessment [9,10]. Facial recognition technology based on CNNs will be used to ensure accurate and rapid identification. CNNs, inspired by how humans and mammals process visual information, are effective in detecting and recognizing image patterns, including facial features [11]. This technology will help reduce the risk of attendance fraud and minimize the need for hardware that may malfunction or become a source of physical contact, which is crucial for preventing the spread of COVID-19.

In addition to facial recognition, the Haversine formula will be applied to calculate the distance between points on the Earth's surface based on latitude and longitude [12]. This formula allows the system to verify that attendance can only be recorded within a specified geographic radius around the institution [13], ensuring data accuracy and preventing attendance from unauthorized locations.

Furthermore, integrating the Haversine formula into the attendance system introduces an additional layer of verification by cross-referencing the geographic coordinates of a user's location with predefined attendance zones. This geographical constraint helps ensure that attendance records are accurate and reflect the physical presence of individuals within the designated area, thereby mitigating risks associated with fraudulent attendance practices.

By setting up geofencing parameters, the system can automatically flag or reject attendance entries from outside the approved radius, thereby enhancing the integrity of attendance tracking. This approach not only improves the precision of location-based verification but also reinforces the security of the attendance process, making it less susceptible to manipulation or misuse. Future updates could explore combining this geographic data with other contextual information, such as time stamps or additional authentication methods, to further bolster the system's reliability and robustness.

II. Method

This study is aimed to carry out the face recognition research and radius processing, which is applied in the form of a mobile application in the presence system that is built with a prototype model. The prototype model is used in this study to carry out the application development process. Each process has its own specifications so that the system can be developed according to what is desired (right on target).

In the application development process, there is an algorithm that is used to carry out the classification process, which is using a CNN and the Haversine formula. The following is a flowchart of the research design described in Fig. 1.

In Fig. 1, a research flow from system development is shown, where it ends with an evaluation of the results. In

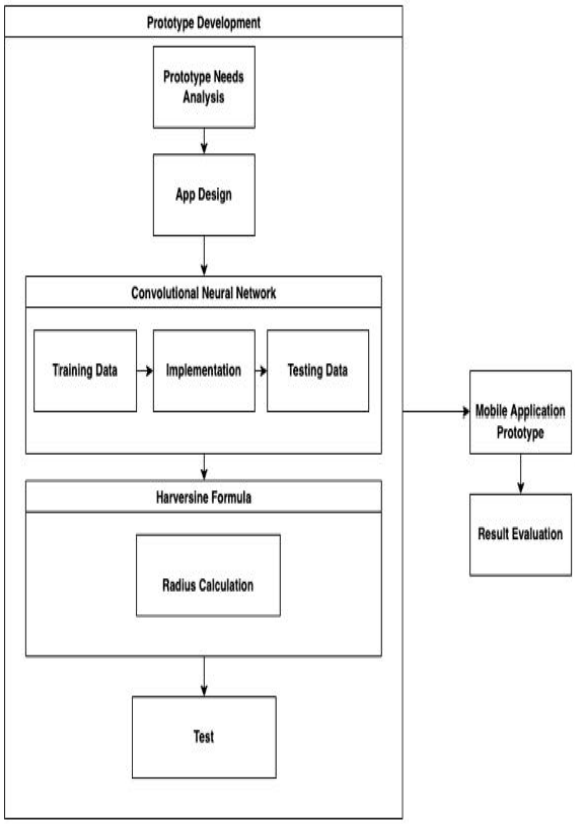

Fig. 1. Application research and development flow.

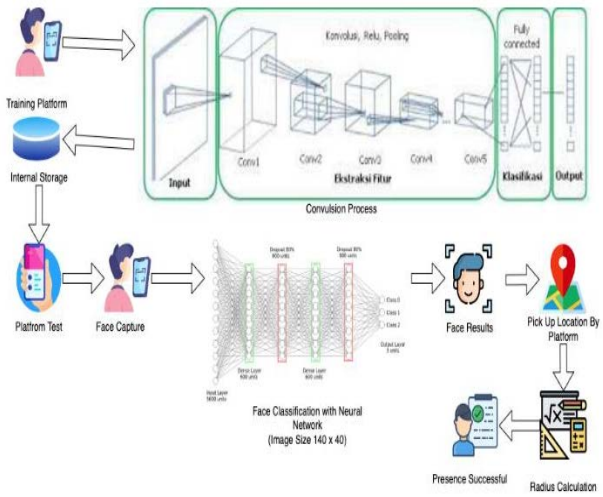

Fig. 2. Analysis prototype.

the prototype development process, there are sub-processes in it, because there is a system development model in the system development process, namely the prototype.

The initial process is to do data training then do the CNN process which consists of convolution, filtering, pooling, flattening, and then stored in internal storage. The face recognition authentication process uses a classification neural network which is the same as the previous training data. If a face is detected, it will then take the user's location and check the radius that has been determined. If the location is already within the radius, attendance can be done (Fig. 2).

The GPS signal strength falls below a certain threshold (e.g., less than –80 dBm) or a GPS signal is unavailable within a 450-m radius from the reference point, the system should automatically switch to an alternative location determination method such as Wi-Fi triangulation or Bluetooth beacons. Implementing rule-based or machine learning algorithms for switching, along with testing in various environments, can help determine the best method based on signal conditions and ensure effective transitions between the GPS and alternative methods.

III. Results and Discussion

At this stage according to the prototype, information of 30 faces is stored in the database and one location that has been set for testing, namely the LPKIA IDE which will be used later for system testing. Face information that has been stored in the database is registered through the mobile prototype. The mobile prototype will communicate with the database using an API either during verification or registration and that applies to face recognition and radius calculations. The mobile prototype for face recognition and radius calculation is shown in Fig. 3.

The experimental results on face recognition using the CNN model are shown in Tables I and II, and Fig. 4, while the Haversine formula is shown in Table III. Face recognition testing uses a static match test model. The static match test aims to determine the speed performance of the face recognition/face identification application in recognizing an input image.

The results of the static match test are shown in Table I.

Table I describes the results of the static math test with the aim of knowing the results of application performance and the error rate results generated from the neural network process at the fully connected layer stage. This test only tests face identification, because it focuses on testing system performance and finding the error rate from the training data results.

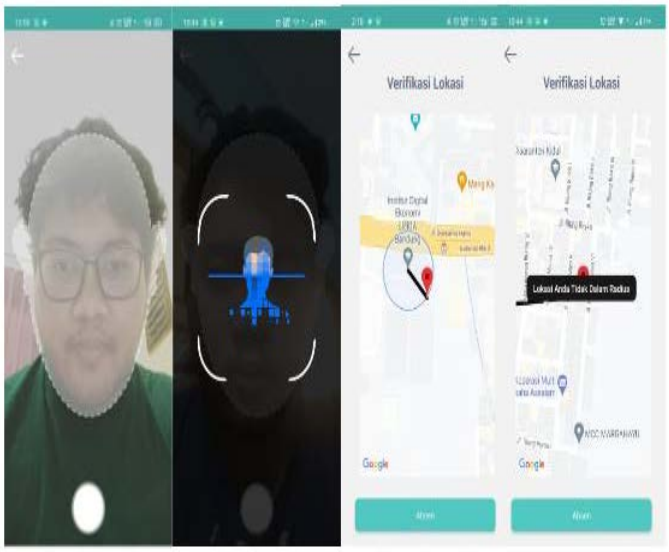

Fig. 3. Mobile prototype.

TABLE I
The Performance of Static Match.

Image testing name	Face identification	
	Time (s)	Error rate
Rizqy1	0.11	**0.29**
Rizqy2	0.11	**0.32**
Rizqy3	0.13	**0.41**
Rizqy4	0.12	**0.42**
Rizqy5	0.13	**0.36**
Taufik1	0.13	**0.34**
Taufik2	0.14	**0.37**
Taufik3	0.11	**0.26**
Taufik4	0.11	**0.31**
Taufik5	0.12	**0.39**
Anisa1	0.13	**0.33**
Anisa2	0.15	**0.30**
Anisa3	0.17	**0.29**
Anisa4	0.13	**0.28**
Anisa5	0.12	**0.32**
Rizky1	0.17	**0.35**
Rizky2	0.13	**0.45**
Rizky3	0.16	**0.42**
Rizky4	0.15	**0.47**
Rizky5	0.11	**0.49**
Rizal1	0.12	**0.43**
Rizal2	0.11	**0.45**
Rizal3	0.15	**0.32**
Rizal4	0.14	**0.35**
Rizal5	0.11	**0.33**
Reza1	0.14	**0.24**
Reza2	0.16	**0.25**
Reza3	0.17	**0.33**
Reza4	0.13	**0.38**
Reza5	**0.12**	**0.45**

The implications of the results presented in Table I are significant for evaluating both the performance and the reliability of the application. By focusing exclusively on face identification, the test highlights how well the application's neural network performs in accurately recognizing and distinguishing faces [14,16]. The observed error rate provides valuable insights into the effectiveness of the fully connected layer stage within the neural network.

1. **Performance Assessment**: The data indicates how well the application can perform face identification tasks under static conditions. High accuracy suggests that the application can effectively use neural network processing to identify faces [17,18], making it reliable for scenarios where face recognition is crucial.
2. **Error Rate Analysis**: The error rate results offer an understanding of the potential limitations and areas for improvement within the system. A higher error rate may point to issues such as insufficient training data, suboptimal network architecture, or inadequate feature extraction methods. This analysis can guide future adjustments and enhancements to reduce errors and improve overall performance.
3. **System Reliability**: By concentrating on face identification, the results shed light on the application's capability to handle specific tasks. This focused testing approach allows developers to pinpoint specific challenges related to face recognition and address them, potentially increasing the system's robustness.

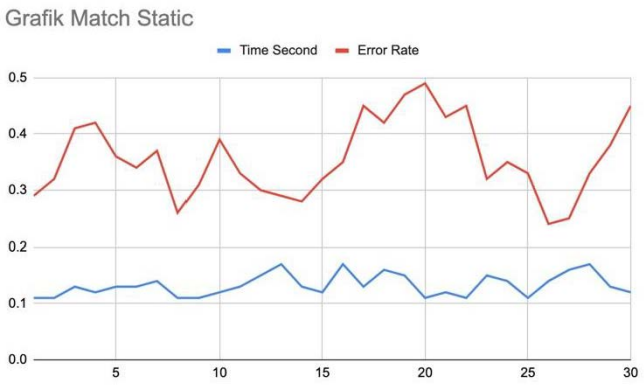

Fig. 4. Mobile prototype.

4. **Training Data Insights**: The results from the training data can help in assessing the quality and representativeness of the dataset used. If the application performs well with the given data, it implies that the training data is of good quality. Conversely, if the error rate is high, it may necessitate revising the dataset to include more diverse and comprehensive samples.

Overall, these implications underscore the importance of continuous testing and refinement. By addressing identified issues and leveraging insights gained from the error rate analysis, developers can enhance the accuracy and reliability of the face identification system in real-world applications.

These will be presented in the form of a graph and the overall results of the test results are shown in Fig. 4.

The line graph illustrates the results of the static match test by 30 test data. In the graph, it can be concluded that the fastest time obtained is 0.11 s and the lowest error rate is 0.26. The longest time obtained is 0.18 s and the highest error value is 0.38.

The results obtained by the application from the performance test and error rate test are very dependent on field conditions, many factors support the test results, such as camera quality, light intensity, performance of the device used [19,20]. From the results of the static match test, it can be obtained the assessment results in the form of the average of the maximum, minimum, and average of the total test data carried out which is presented in the following Table II.

From the assessment table above, it can be concluded that from the total data, the entire application can recognize an input image in the fastest time of 0.11 s with the lowest error rate ranging from 0.24. Then the longest level of time taken by the application in recognizing an input image is around 0.17 s with the highest error rate of 0.49. Then the average of the fastest time and the error rate by the application is 0.132 s and the error rate is around 0.356.

TABLE II
THE ASSESSMENT MATCH STATIC.

Assessment	Time (s)	Error rate
Minimum	0.11	**0.24**
Maximum	0.17	**0.49**
Average	**0.132**	**0.356**

Next, verify the user's position with an agency as mentioned earlier at a radius of 50 m within and outside. At this stage, a comparison is made between the distance calculated from the Haversine formula and the distance calculated from the Google Maps API calculation to get effective results. The results are shown in Table III.

From the tests that have been carried out with different user positions within the radius and outside the radius, the results can be seen in the table above, that this application has a good accuracy in determining the distance based on the comparison provided by Google Maps API with the Haversine calculation formula. The use of this application will be better if it is used indoors, because if it is used indoors, the accuracy will decrease or be inaccurate. This is because there is a possibility that the GPS signal used will interfere with other signals or the GPS signal will be blocked by buildings.

To address these limitations and improve the accuracy, several enhancements can be considered [3,21]. Implementing indoor positioning systems such as Wi-Fi triangulation or Bluetooth beacons could significantly boost location precision in environments where GPS signals are weak or obstructed. Additionally, incorporating algorithms that can intelligently switch between GPS and other positioning methods based on signal strength or availability may further enhance the reliability [22,23]. Further testing in various indoor settings will help refine these approaches and ensure that the application maintains its performance across different conditions. Continuous updates and optimizations, informed by user feedback and technological advancements, will be essential for maximizing the effectiveness of the application in diverse environments.

Critical Review of the Study's Limitations

1. Limited Data and Sample Size:

- **Small Dataset:** Currently, the database includes information from only thirty faces. This may not be sufficient to provide a comprehensive understanding of the system's performance, especially in real-world scenarios that may involve a wider range of variables and facial diversity.
- **Data Variability:** If the facial data used for testing is not sufficiently diverse, the results obtained may not accurately reflect the system's performance outside the sample used. For instance, the results from testing a specific group of individuals may differ from those of a more diverse population.

2. Static Match Test Evaluation:

- **Limitations of Static Match Test:** This test only evaluates the speed and error rate in face identification without considering other variables such as lighting conditions, viewpoint, or facial expressions. Additional testing under various lighting conditions and facial angles would provide a more comprehensive understanding of the system's robustness.
- **Error Analysis:** Although the data presents the range of times and error rates, a detailed analysis of the specific

TABLE III
CALCULATIONS OF EFFECTIVES RESULTS.

No.	Agency location	User location	Haversine distance (Km)	Google API Distance (Km)	Difference	Result test
1	Jl. Soekarno Hatta no. 456 Bandung (−6.949757, 107.6246) Inside Radius	(−6.949821, 107.6246)	0.09	0.12	0.03	**Success**
		(−6.949679, 107.62447)	0.05	0.09	0.04	**Success**
		(−6.949652, 107.62467)	0.03	0.1	0.07	**Success**
		(−6.949740, 107.62477)	0.07	0.17	0.010	**Success**
		(−6.949817, 107.62463)	0.1	0.16	0.06	**Success**
2	Jl. Soekarno Hatta no. 456 Bandung (−6.949757, 107.6246) Outside Radius	(−6.949821, 107.6246)	0.5	0.67	0.17	**Failure**
		(−6.962751, 107.62663)	1.5	1.8	0.3	**Failure**
		(−6.952825, 107.62148)	1.3	2.1	0.8	**Failure**
		(−6.94992, 107.623833)	0.3	0.5	0.2	**Failure**
		(−6.949867, 107.62643)	**0.4**	**0.25**	**0.15**	**Failure**

causes of errors (e.g., lighting conditions or camera quality) is lacking. This could provide deeper insights into how to reduce errors.

3. Haversine Formula and Google Maps API Comparison:

- **Comparison Limitations:** The comparison between the Haversine formula and Google Maps API provides insights into accuracy but does not address the limitations of each method. For example, the Haversine formula assumes the Earth is a perfect sphere, whereas its shape is slightly oblate.

  Environmental Impact: Distance measurement accuracy may be affected by environmental conditions such as obstructed or weak GPS signals. A more in-depth evaluation is needed to understand how these factors influence the results.

4. Recommendations for Improvement:

- **Indoor Positioning Methods:** Implementing indoor positioning systems like Wi-Fi triangulation or Bluetooth beacons could indeed enhance accuracy in areas with weak GPS signals. However, further implementation and testing in various indoor environments are required to ensure their effectiveness.

  Adaptive Algorithms: Incorporating algorithms that can intelligently switch between positioning methods based on signal strength or availability could further enhance reliability. Evaluating how these algorithms perform in different scenarios is necessary.

By addressing these limitations, it is anticipated that future research and system development will place greater emphasis on enhancing accuracy and reliability under diverse operational conditions.

IV. CONCLUSION

From the results of research and testing that have been carried out for the implementation of the CNN method and the Haversine formula method for the presence system, it can be applied according to the method and the results obtained are the use of the CNN method and the Haversine formula method can be combined reliably to support the presence independently, because it uses biometric authentication in the form of face recognition and calculation of the distance from the user's point in real time with a predetermined radius so as to reduce the spread of COVID-19.

REFERENCES

[1] M. L. Chiu and C. N. Lin, "Developing supply chain open innovation capability: The mediating role of the knowledge creation process, governance mechanism and technology as a driver," *J. Innov. Knowl.*, vol. 7, no. 4, Oct. 2022, doi: 10.1016/j.jik.2022.100264.

[2] M. Shahzad, Y. Qu, S. U. Rehman, and A. U. Zafar, "Adoption of green innovation technology to accelerate sustainable development among manufacturing industry," *J. Innov. Knowl.*, vol. 7, no. 4, Oct. 2022, doi: 10.1016/j.jik.2022.100231.

[3] P. C. Patel, M. Stenmark, V. Parida, and P. K. Tran, "A socio-institutional perspective on the reluctance among the elderly concerning the commercialization of 3D surgical video technology in Sweden," *J. Innov. Knowl.*, vol. 8, no. 2, Apr. 2023, doi: 10.1016/j.jik.2023.100361.

[4] M. T. Ballestar, E. Camiña, Á. Díaz-Chao, and J. Torrent-Sellens, "Productivity and employment effects of digital complementarities," *J. Innov. Knowl.*, vol. 6, no. 3, pp. 177–190, Jul. 2021, doi: 10.1016/j.jik.2020.10.006.

[5] S. T. Hussain, S. Lei, T. Akram, M. J. Haider, S. H. Hussain, and M. Ali, "Kurt Lewin's change model: A critical review of the role of leadership and employee involvement in organizational change," *J. Innov. Knowl.*, vol. 3, no. 3, pp. 123–127, Sep. 2018, doi: 10.1016/j.jik.2016.07.002.

[6] B. Wassmann, M. Siegrist, and C. Hartmann, "The role of heuristics for composing an environmentally friendly meal," *J. Clean. Prod.*, vol. 402, May 2023, doi: 10.1016/j.jclepro.2023.136818.

[7] Y. T. Yadgar, "The effect of individual factors on user behaviour and the moderating role of trust: an empirical investigation of consumers' acceptance of electronic banking in the Kurdistan Region of Iraq," *Financ. Innov.*, vol. 6, no. 1, Dec. 2020, doi: 10.1186/s40854-020-00206-0.

[8] A. Musamih, K. Salah, R. Jayaraman, I. Yaqoob, Y. Al-Hammadi, and J. Antony, "Blockchain-based solution for COVID-19 vaccine waste reduction," *J. Clean. Prod.*, vol. 372, Oct. 2022, doi: 10.1016/j.jclepro.2022.133619.

[9] G. Muchenje and M. Seppänen, "Unpacking task-technology fit to explore the business value of big data analytics," *Int. J. Inf. Manage.*, vol. 69, Apr. 2023, doi: 10.1016/j.ijinfomgt.2022.102619.

[10] M. Steen and J. Nauta, "Advantages and disadvantages of societal engagement: a case study in a research and technology organization," *J. Responsible Innov.*, vol. 7, no. 3, pp. 598–619, 2020, doi: 10.1080/23299460.2020.1813864.

[11] R. M. Puertas Medina, J. M. Martín Martín, J. M. Guaita Martínez, and P. Serdeira Azevedo, "Analysis of the role of innovation and efficiency in coastal destinations affected by tourism seasonality," *J. Innov. Knowl.*, vol. 7, no. 1, Jan. 2022, doi: 10.1016/j.jik.2022.100163.

[12] Y. K. Dwivedi *et al.*, "Metaverse beyond the hype: Multidisciplinary perspectives on emerging challenges, opportunities, and agenda for research, practice and policy," *Int. J. Inf. Manage.*, vol. 66, Oct. 2022, doi: 10.1016/j.ijinfomgt.2022.102542.

[13] A. Alferaih, "Starting a New Business? Assessing University Students' Intentions towards Digital Entrepreneurship in Saudi Arabia," *Int. J. Inf. Manag. Data Insights*, vol. 2, no. 2, p. 100087, 2022, doi: 10.1016/j.jjimei.2022.100087.

[14] R. Sharma, A. Kumar, and C. Chuah, "Turning the blackbox into a glassbox: An explainable machine learning approach for understanding hospitality customer," *Int. J. Inf. Manag. Data Insights*, vol. 1, no. 2, Nov. 2021, doi: 10.1016/j.jjimei.2021.100050.

[15] Aldaej, A., Ullah, I., Ahanger, T.A. *et al.* Ensemble technique of intrusion detection for IoT-edge platform. *Sci Rep* **14**, 11703 (2024). https://doi.org/10.1038/s41598-024-62435-y

[16] Q. Jiang, X. Huang, and Z. Chen, "Antecedents and consequences of consumers' trust in electronic intermediaries: An empirical study of hotel booking websites," *Front. Bus. Res. China*, vol. 3, no. 4, pp. 647–666, 2009, doi: 10.1007/s11782-009-0031-1.

[17] Y. Zhai, "Design of Oral English Training System Based on Big Data Content Recommendation Algorithm," in *Procedia Computer Science*, Elsevier B.V., 2022, pp. 420–426. doi: 10.1016/j.procs.2022.10.059.

[18] J. Gao, Q. Feng, T. Guan, and W. Zhang, "Unlocking paths for transforming green technological innovation in manufacturing industries," *J. Innov. Knowl.*, vol. 8, no. 3, Jul. 2023, doi: 10.1016/j.jik.2023.100394.

[19] G. D. Sharma, S. Kraus, M. Srivastava, R. Chopra, and A. Kallmuenzer, "The changing role of innovation for crisis management in times of COVID-19: An integrative literature review," *J. Innov. Knowl.*, vol. 7, no. 4, Oct. 2022, doi: 10.1016/j.jik.2022.100281.

[20] C. Li, A. Khan, H. Ahmad, and M. Shahzad, "Business analytics competencies in stabilizing firms' agility and digital innovation amid COVID-19," *J. Innov. Knowl.*, vol. 7, no. 4, Oct. 2022, doi: 10.1016/j.jik.2022.100246.

[21] M. Skare and D. Riberio Soriano, "How globalization is changing digital technology adoption: An international perspective," *J. Innov. Knowl.*, vol. 6, no. 4, pp. 222–233, Oct. 2021, doi: 10.1016/j.jik.2021.04.001.

[22] I. Kulkov *et al.*, "Technology entrepreneurship in healthcare: Challenges and opportunities for value creation," *J. Innov. Knowl.*, vol. 8, no. 2, Apr. 2023, doi: 10.1016/j.jik.2023.100365.

[23] L. P. Qu and H. Li, "Analysis of distribution path optimization algorithm based on big data technology," *J. King Saud Univ. - Sci.*, vol. 34, no. 5, Jul. 2022, doi: 10.1016/j.jksus.2022.102019.

Dear **Andy Victor Pakpahan,**

Your paper entitled **"CONVOLUTIONAL NEURAL NETWORK AND HAVERSINE FORMULA IN PRESENCE SYSTEM FOR EASY ATTENDANCE"** has been accepted for presentation at the 2024 ASIAN CONFERENCE ON COMMUNICATION AND NETWORKS (AsianComNet) which is scheduled from 24–27 October 2024 in Bangkok, Thailand. Per IEEE Policy, all accepted papers must be registered with a full registration fee and be presented in person by an author to be published in the conference proceedings. The authors are expected to undertake all expenses associated with the travel to this conference.

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CONVOLUTIONAL NEURAL NETWORK AND HAVERSINE FORMULA IN PRESENCE SYSTEM FOR EASY ATTENDANCE

Andy Victor Pakpahan

2024 Asian Conference on Communication and Networks (ASIANComNet)

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24-27 October, 2024
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The AsianComNet 2024 Organizing Committee certifies that **Andy Victor Pakpahan** attended the 2024 IEEE Asian Conference on Communications and Networks (AsianComNet) and presented the paper titled **CONVOLUTIONAL NEURAL NETWORK AND HAVERSINE FORMULA IN PRESENCE SYSTEM FOR EASY ATTENDANCE**

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Status:	Final Paper Version: 2 Locked
Presentation type intention:	Oral Presentation
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Track/Subject:	3. Privacy, Security for Networks
Authors:	1. Andy Victor Pakpahan abang@lpkia.ac.id Institut Digital Ekonomi LPKIA
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Ketua Program Studi Teknik Informatika, Fakultas Teknologi Informasi dan Digital, Institut Digital Ekonomi LPKIA.
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Email	abang@lpkia.ac.id
Department	Informatics Engineering
Country/Zone	Indonesia
Province	Jawa Barat
Job Title	Lecture

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Ketua Program Studi Teknik Informatika, Fakultas Teknologi Informasi dan Digital, Institut Digital Ekonomi LPKIA.
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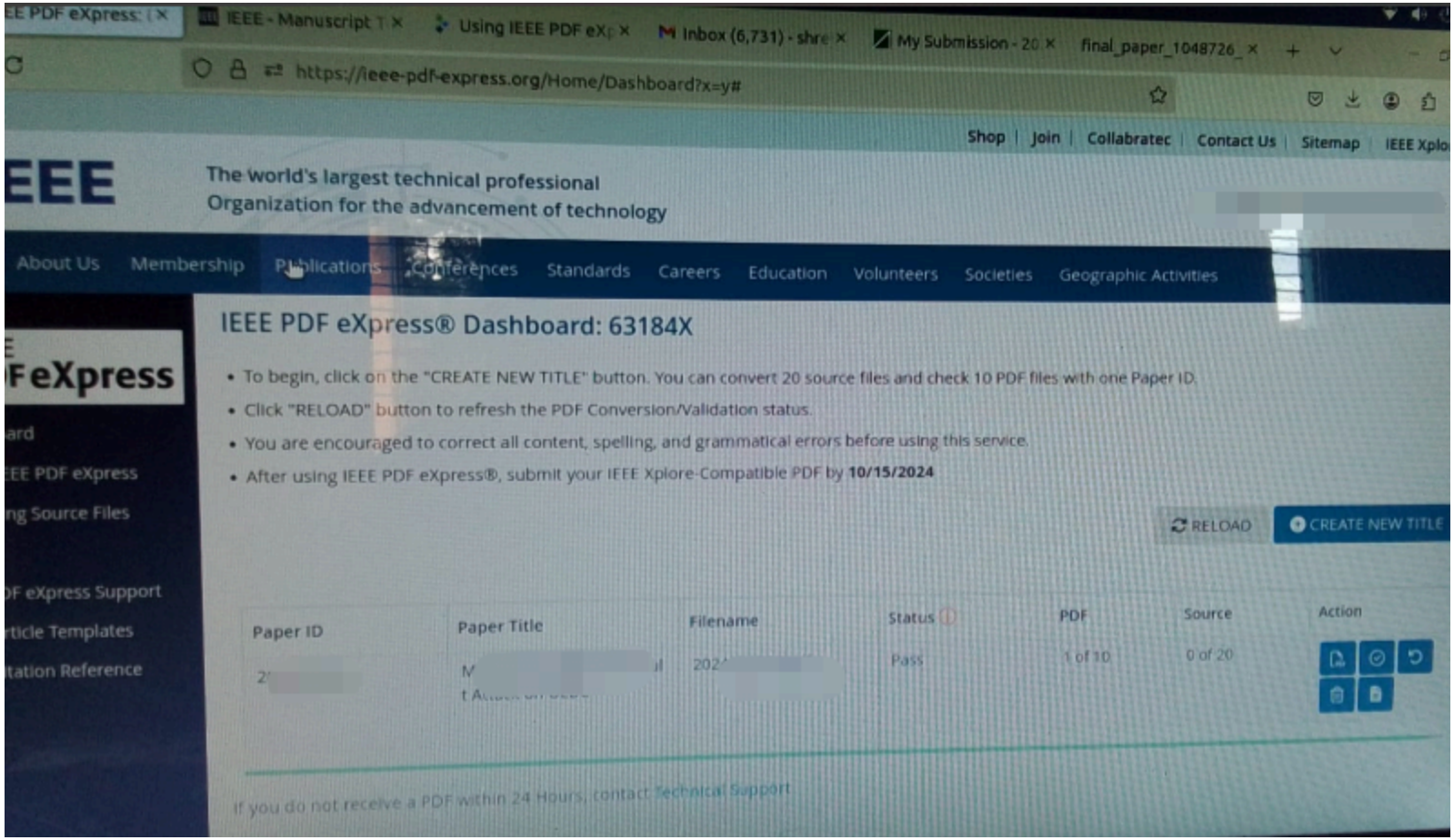

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Certificate of Attendance & Appreciation-AsianComNet 2024

1 message

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Dear Participant,

On behalf of the AsianComNet 2024 organizing committee, we would like to extend our sincere gratitude for your valuable participation and insightful presentation at the conference. Your contribution played an important role in the success of the event.

As a token of our appreciation, please find attached your Certificate of Attendance, which acknowledges your involvement in AsiaComNet 2024.

Once again, we thank you for your time, effort, and expertise. We hope that your experience was rewarding, and we look forward to the possibility of collaborating with you again in the future.

Best regards,
AsianComNet 2024 Organizing Committee

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ASIANComNet 2024: Preliminary Program and Draft Timetable Updated

1 message

王少雄 <asiancomnet@usssociety.org> 11 October 2024 at 22:21

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<rizgar.r.ghafour@nust.edu.iq>, Njcool21 <Njcool21@gmail.com>, "Eng.co.zahraa" <Eng.co.zahraa@mpu.edu.iq>, gayathriparasa20 <gayathriparasa20@gmail.com>, "rusul.l.hadi" <rusul.l.hadi@nust.edu.iq>, "eng.hassan" <eng.hassan@mpu.edu.iq>, "moh.mtech89" <moh.mtech89@gmail.com>, "tamilselvi.p" <tamilselvi.p@rajalakshmi.edu.in>, "maysam.reyad" <maysam.reyad@altoosi.edu.iq>

Cc: prabagaranen <prabagaranen@ssn.edu.in>, Vitawat Sittakul <vitawat.s@cit.kmutnb.ac.th>

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The preliminary program and draft timetable for ASIANComNet 2024 are now available online:

- Preliminary Program: https://asiancomnet2024.aconf.org/program.html

- Draft Time Table: https://asiancomnet2024.aconf.org/timetable.html

Please note they are not final version.

Authors intending to publish their papers in the conference proceedings are required to present their work either orally, virtually, or via poster presentation. For ASIANComNet, physical poster presentations are not conducted; instead, authors can upload a recorded video and slides to the conference website to serve as the poster presentation.

Should your paper/presentation not be listed in the program, please reach out to us at asiancomnet@usssociety.org.

We also invite you to join our Whatsapp chat group for the latest updates:
https://chat.whatsapp.com/HWRmX5hM1hFJKsbgMvpNTz

Best regards,

The ASIANComNet 2024 Team

Andy paper

by 1 1

Submission date: 23-Sep-2024 01:12AM (UTC-0400)
Submission ID: 2462624008
File name: final_paper_1060346_3ef4v8d6mzqoar9c_v2_-_Copy.docx (1.02M)
Word count: 3182
Character count: 18075

CONVOLUTIONAL NEURAL NETWORK AND HAVERSINE FORMULA IN PRESENCE SYSTEM FOR EASY ATTENDANCE

*Note: Sub-titles are not captured in Xplore and should not be used

***Abstract*—As COVID-19 cases continue to rise, minimizing physical contact is essential to curb the virus's spread. IDE LPKIA, an educational institution, currently uses a centralized attendance system based on fingerprint scanning, which increases physical contact and thus the potential for virus transmission. To address this issue, this research proposes a new attendance system that allows employees to mark their attendance independently using their personal smartphones, eliminating the need for centralized attendance stations. The proposed system integrates facial recognition and location radius technology. Facial recognition is implemented using a convolutional neural network (CNN) to ensure accurate identification, while the Haversine formula is employed to calculate the location radius, ensuring attendance can only be registered within a specific geographic area around the institution. This approach not only reduces physical contact but also prevents attendance fraud, as employees can only check in based on their facial identity and within the defined location radius. This system aims to enhance safety and integrity in attendance tracking amidst the ongoing pandemic.**

Keywords— Face Recognition; attendance; convolutional neural network; haversine formula.

I. INTRODUCTION

Currently the number of the spread of COVID-19 is increasing, so a system is needed to reduce the spread of COVID-19. One place that is no exception is institutions, likes educational, health, office and government agencies. Therefore, the use of information technology in today's era is so important. Technology that is currently used in various aspects of human life is currently using information technology in everyday life[1]. This is also inseparable from the application of technology in the attendance system A concise and factual abstract is required[2], [3].

To further enhance the effectiveness of these technology-driven attendance systems, several key advancements can be incorporated. For instance, implementing contactless biometric systems, such as facial recognition or iris scanning, can streamline the check-in process while minimizing physical contact. Additionally, incorporating real-time health monitoring features, such as temperature checks or symptom reporting, into the attendance system can provide an added layer of precaution. This allows institutions to quickly identify and address potential health risks, thereby preventing potential outbreaks.

Moreover, integrating geo-fencing technology with attendance systems can ensure that individuals are present within designated areas and comply with location-specific health regulations. Data analytics can also play a crucial role by analyzing attendance patterns and detecting anomalies that may indicate potential health concerns or breaches in protocol. These data-driven insights can inform decision-making and help institutions respond proactively to emerging trends.

Overall, the integration of advanced technologies in attendance systems not only enhances operational efficiency but also aligns with public health measures, contributing to a safer and more responsive environment. As the pandemic continues to evolve, ongoing innovation and adaptation of these systems will be essential in supporting institutional resilience and safeguarding public health.

Attendance is an activity that is often carried out almost every day both for employees at work, currently the attendance device used by employees, or the community is quite developed and diverse, such as one of them using fingerprints and so on [4], but it is very unfortunate that the attendance method still has several shortcomings such as hardware damage and being required to make physical contact so that this can be a medium for the spread of COVID-19[5].

The Attendance System is an important factor for a government office or a company to achieve work goals, this is related to discipline which has an impact on the performance of each employee. So the face recognition system for the attendance system can reduce physical contact and reduce the chances of spreading and adjusting the location when attendance can also be a consideration for not king attendance outside the reach of an agency.

Convolutional Neural Network (CNN) is a type of neural network commonly used in image data. CNN can be used to detect and recognize objects in an image . CNN is a technique inspired by the way mammals and humans produce visual rception [6]. Haversine method The formula of this method is used to calculate the distance between points on the earth's surface using latitude and longitude as input variables . The haversine formula is an important equation of navigation, giving the great circle distance between two points on the surface of a sphere (earth) based on longitude and latitude .

Based on this, it is necessary to develop the existing Attendance System because several attendance systems in agencies Currently the attendance recording process is still mostly done manually and is considered less effective [7], so in this study the attendance recording process will be carried out with face and face recognition[8]. checking radius from agencies using the android platform which is considered capable of efficient attendance recording time and reducing physical contact so as to reduce the spread of COVID-19.

To address the shortcomings of current attendance systems, this study proposes the implementation of advanced

technology that integrates facial recognition and location radius assessment[9][10]. Facial recognition technology based on Convolutional Neural Networks (CNNs) will be used to ensure accurate and rapid identification. CNNs, inspired by how humans and mammals process visual information, are effective in detecting and recognizing image patterns, including facial features [11]. This technology will help reduce the risk of attendance fraud and minimize the need for hardware that may malfunction or become a source of physical contact, which is crucial for preventing the spread of COVID-19.

In addition to facial recognition, the Haversine formula will be applied to calculate the distance between points on the Earth's surface based on latitude and longitude [12]. This formula allows the system to verify that attendance can only be recorded within a specified geographic radius around the institution[13], ensuring data accuracy and preventing attendance from unauthorized locations.

Furthermore, integrating the Haversine formula into the attendance system introduces an additional layer of verification by cross-referencing the geographic coordinates of a user's location with predefined attendance zones. This geographical constraint helps ensure that attendance records are accurate and reflect the physical presence of individuals within the designated area, thereby mitigating risks associated with fraudulent attendance practices.

By setting up geofencing parameters, the system can automatically flag or reject attendance entries from outside the approved radius, thereby enhancing the integrity of attendance tracking. This approach not only improves the precision of location-based verification but also reinforces the security of the attendance process, making it less susceptible to manipulation or misuse. Future updates could explore combining this geographic data with other contextual information, such as time stamps or additional authentication methods, to further bolster the system's reliability and robustness.

II. METHOD

To This study aimed to face recognition research and radius processing which is applied in the form of a mobile application in the presence system is built with a prototype model. The prototype model is used in this study to carry out the application development process. Each process has its own specifications so that the system can be developed according to what is desired (right on target).

In the application development process, there is an algorithm that is used to carry out the classification process, which is using a convolutional neural network & haversine formula. The following is a flowchart of the research design described in Figure 1.

Figure 1. Application research and development flow

In Figure 1 above is a research flow from system development, then ends with an evaluation of the results, in the prototype development process, there are sub-processes in it, because in the system development process there is a system development model, namely the prototype.

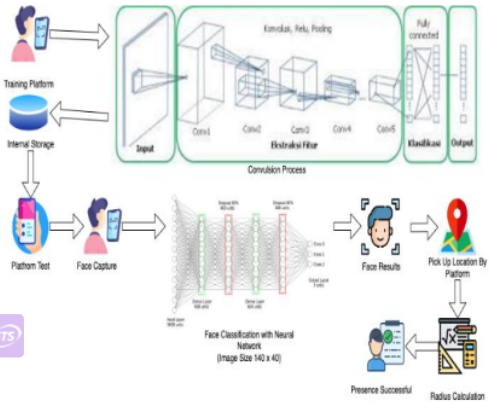

Figure 2. Analysys Prototype

The initial process is to do data training then do the convolutional neural network process which consists of convolution, filtering, pooling, flattening, then stored in internal storage . The face recognition authentication process uses a classification neural network which is the same as the

previous training data. If a face is detected, it will then take the user's location and check the radius that has been determined. If the location is already within the radius, attendance can be done.

The GPS signal strength falls below a certain threshold (e.g., less than -80 dBm) or GPS signal is unavailable within a 450-meter radius from the reference point, the system should automatically switch to an alternative location determination method such as Wi-Fi triangulation or Bluetooth beacons. Implementing rule-based or machine learning algorithms for switching, along with testing in various environments, can help determine the best method based on signal conditions and ensure effective transitions between GPS and alternative methods.

III. RESULTS AND DISCUSSION

The At this stage according to the prototype. Information of thirty faces is stored in database and one location that has been set for testing, namely the LPKIA IDE which will be used later for system testing. Face information that has been stored in the database is registered through the mobile prototype. The mobile prototype will communicate with the database using an API either during verification or registration and that applies to face recognition and radius calculations. The mobile prototype for face recognition and radius calculation as shown in Figure 3.

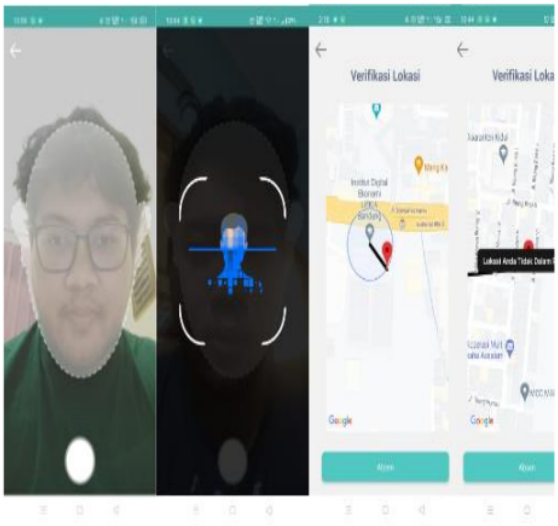

Figure 3. Mobile Prototype

The experimental results on face recognition using the cnn model are shown in Tables 1 and 2, and Figure 4 while the haversine formula is shown in table 3. Face recognition testing uses a static match test model. The static match test aims to determine the speed performance of the face recognition/face identification application in recognizing an input image.

The results of the static match test are shown in table 1.

Table 1. The performance of Static Match.

Image Testing Name	Face Identification	
	Time Second	Error Rate
Rizqy1	0.11	**0.29**
Rizqy2	0.11	**0.32**
Rizqy3	0.13	**0.41**
Rizqy4	0.12	**0.42**
Rizqy5	0.13	**0.36**
Taufik1	0.13	**0.34**
Taufik2	0.14	**0.37**
Taufik3	0.11	**0.26**
Taufik4	0.11	**0.31**
Taufik5	0.12	**0.39**
Anisa1	0.13	**0.33**
Anisa2	0.15	**0.30**
Anisa3	0.17	**0.29**
Anisa4	0.13	**0.28**
Anisa5	0.12	**0.32**
Rizky1	0.17	**0.35**
Rizky2	0.13	**0.45**
Rizky3	0.16	**0.42**
Rizky4	0.15	**0.47**
Rizky5	0.11	**0.49**
Rizal1	0.12	**0.43**
Rizal2	0.11	**0.45**
Rizal3	0.15	**0.32**
Rizal4	0.14	**0.35**
Rizal5	0.11	**0.33**
Reza1	0.14	**0.24**
Reza2	0.16	**0.25**
Reza3	0.17	**0.33**
Reza4	0.13	**0.38**
Reza5	**0.12**	**0.45**

The table 1. describes the results of the static math test with the aim of knowing the results of application performance and the error rate results generated from the neural network process at the fully connected layer stage. This test only tests face identification, because it focuses on testing system performance and finding the error rate from the training data results.

The implications of the results presented in Table 1 are significant for evaluating both the performance and the reliability of the application. By focusing exclusively on face identification, the test highlights how well the application's neural network performs in accurately recognizing and distinguishing faces[14], [15]. The observed error rate provides valuable insights into the effectiveness of the fully connected layer stage within the neural network.

1. **Performance Assessment**: The data indicates how well the application can perform face identification tasks under static conditions. High accuracy suggests that the application can effectively use neural network processing to identify faces[16], [17], making it reliable for scenarios where face recognition is crucial.
2. **Error Rate Analysis**: The error rate results offer an understanding of the potential limitations and areas for improvement within the system. A higher error rate may point to issues such as insufficient training data, suboptimal network architecture, or inadequate feature extraction methods. This analysis can guide

future adjustments and enhancements to reduce errors and improve overall performance.

3. **System Reliability**: By concentrating on face identification, the results shed light on the application's capability to handle specific tasks. This focused testing approach allows developers to pinpoint specific challenges related to face recognition and address them, potentially increasing the system's robustness.
4. **Training Data Insights**: The results from the training data can help in assessing the quality and representativeness of the dataset used. If the application performs well with the given data, it implies that the training data is of good quality. Conversely, if the error rate is high, it may necessitate revising the dataset to include more diverse and comprehensive samples.

Overall, these implications underscore the importance of continuous testing and refinement. By addressing identified issues and leveraging insights gained from error rate analysis, developers can enhance the accuracy and reliability of the face identification system in real-world applications.

Then will be presented a graph of the overall results of the test results are shown in Figure 4.

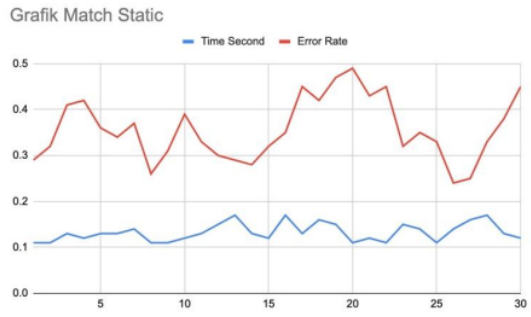

Figure 4. Mobile Prototype

The line graph illustrates the results of the static match test by 30 test data. In the graph, it can be concluded that the fastest time obtained is 0.11 second and the lowest error rate is 0.26. for the longest time obtained is 0.18 second and the highest error value is 0.38

The results obtained by the application from the performance test and error rate test are very dependent on field conditions, many factors support the test results, such as camera quality, light intensity, performance of the device used[18], [19]. From the results of the static match test, it can be obtained the assessment results in the form of the average of the maximum, minimum, and average of the total test data carried out which is presented in the following table.

Table 2. The assessment match static

Assessment	Time Second	Error Rate
Minimum	0.11	**0.24**
Maximum	0.17	**0.49**
Average	**0.132**	**0.356**

From the assessment table above, it can be concluded that from the total data, the entire application can recognize an input image in the fastest time of 0.11 seconds with the lowest error rate ranging from 0.24. Then the longest level of time taken by the application in recognizing an input image is around 0.17 seconds with the highest error rate of 0.49. Then the average of the fastest time and the error rate by the application is 0.132 second and the error rate is around 0.356. Next, verify the user's position with an agency as mentiod earlier radius of 50m inside and outside the radius. At this stage, a comparison is made between the distance calculated from the Haversine formula and the distance calculated from the Google Maps API calculation to get effective results. the result are shown in table 3.

Table 3. Calculations Effectives Results

No	Agency Location	User Location	Haversine Distance (Km)	Google API Distance (Km)	Differen	Result Test
1	Jl. Soekarno Hatta no. 456 Bandung (-6.949757, 107.6246) Inside Radius	(-6.949821, 107.6246)	0.09	0.12	0.03	Success
		(-6.949679, 107.62447)	0.05	0.09	0.04	Success
		(-6.949652, 107.62467)	0.03	0.1	0.07	Success
		(-6.949740, 107.62477)	0.07	0.17	0.010	Success
		(-6.949817, 107.62463)	0.1	0.16	0.06	Success
2	Jl. Soekarno Hatta no. 456 Bandung (-6.949757, 107.6246) Outside Radius	(-6.949821, 107.6246)	0.5	0.67	0.17	Failed
		(-6.962751, 107.62663)	1.5	1.8	0.3	Failed
		(-6.952825, 107.62148)	1.3	2.1	0.8	Failed
		(-6.94992, 107.623833)	0.3	0.5	0.2	Failed
		(-6.949867, 107.62643)	**0.4**	**0.25**	**0.15**	Failed

From the tests that have been carried out with different user positions within the radius and outside the radius, the results can be seen in the table above, that this application has a good accuracy in determining the distance based on the comparison provided by Google Maps API with

the Haversine calculation formula. The use of this application will be better If it is used indoors, because if it is used indoors, the accuracy will decrease or be inaccurate. This is because there is a possibility that the GPS signal used will interfere with other signals or the GPS signal will be blocked by buildings.

To address these limitations and improve accuracy, several enhancements can be considered[3], [20]. Implementing indoor positioning systems such as Wi-Fi triangulation or Bluetooth beacons could significantly boost location precision in environments where GPS signals are weak or obstructed. Additionally, incorporating algorithms that can intelligently switch between GPS and other positioning methods based on signal strength or availability may further enhance reliability[21], [22]. Further testing in various indoor settings will help refine these approaches and ensure that the application maintains its performance across different conditions. Continuous updates and optimizations, informed by user feedback and technological advancements, will be essential for maximizing the effectiveness of the application in diverse environments.

Critical Review of the Study's Limitations

1. Limited Data and Sample Size:

- **Small Data Set:** Currently, the database includes information from only thirty faces. This may not be sufficient to provide a comprehensive understanding of the system's performance, especially in real-world scenarios that may involve a wider range of variables and facial diversity.
- **Data Variability:** If the facial data used for testing is not sufficiently diverse, the results obtained may not accurately reflect the system's performance outside the sample used. For instance, the results from testing a specific group of individuals may differ from those of a more diverse population.

2. Static Match Test Evaluation:

- **Limitations of Static Match Test:** This test only evaluates the speed and error rate in face identification without considering other variables such as lighting conditions, viewpoint, or facial expressions. Additional testing under various lighting conditions and facial angles would provide a more comprehensive understanding of the system's robustness.
- **Error Analysis:** Although the data presents the range of times and error rates, a detailed analysis of the specific causes of errors (e.g., lighting conditions or camera quality) is lacking. This could provide deeper insights into how to reduce errors.

3. Haversine Formula and Google Maps API Comparison:

- **Comparison Limitations:** The comparison between the Haversine formula and Google Maps API provides insights into accuracy but does not address the limitations of each method. For example, the Haversine formula assumes the Earth is a perfect sphere, whereas its shape is slightly oblate.
- **Environmental Impact:** Distance measurement accuracy may be affected by environmental conditions such as obstructed or weak GPS signals. A more in-depth evaluation is needed to understand how these factors influence the results.

4. Recommendations for Improvement:

- **Indoor Positioning Methods:** Implementing indoor positioning systems like Wi-Fi triangulation or Bluetooth beacons could indeed enhance accuracy in areas with weak GPS signals. However, further implementation and testing in various indoor environments are required to ensure their effectiveness.
- **Adaptive Algorithms:** Incorporating algorithms that can intelligently switch between positioning methods based on signal strength or availability could further enhance reliability. Evaluating how these algorithms perform in different scenarios is necessary.

By addressing these limitations, it is anticipated that future research and system development will place greater emphasis on enhancing accuracy and reliability under diverse operational conditions.

IV. CONCLUSION

From the results of research and testing that have been carried out for the implementation of the convolutional neural network method and the haversine formula method for the presence system, it can be applied according to the method and the results obtained are the use of the convolutional neural network method and the haversine formula method can be combined reliably to support the presence independently, because it uses biometric authentication in the form of face recognition and calculation of the distance from the user's point in real time with a predetermined radius so as to reduce the spread of COVID-19.

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Andy paper

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Possessive

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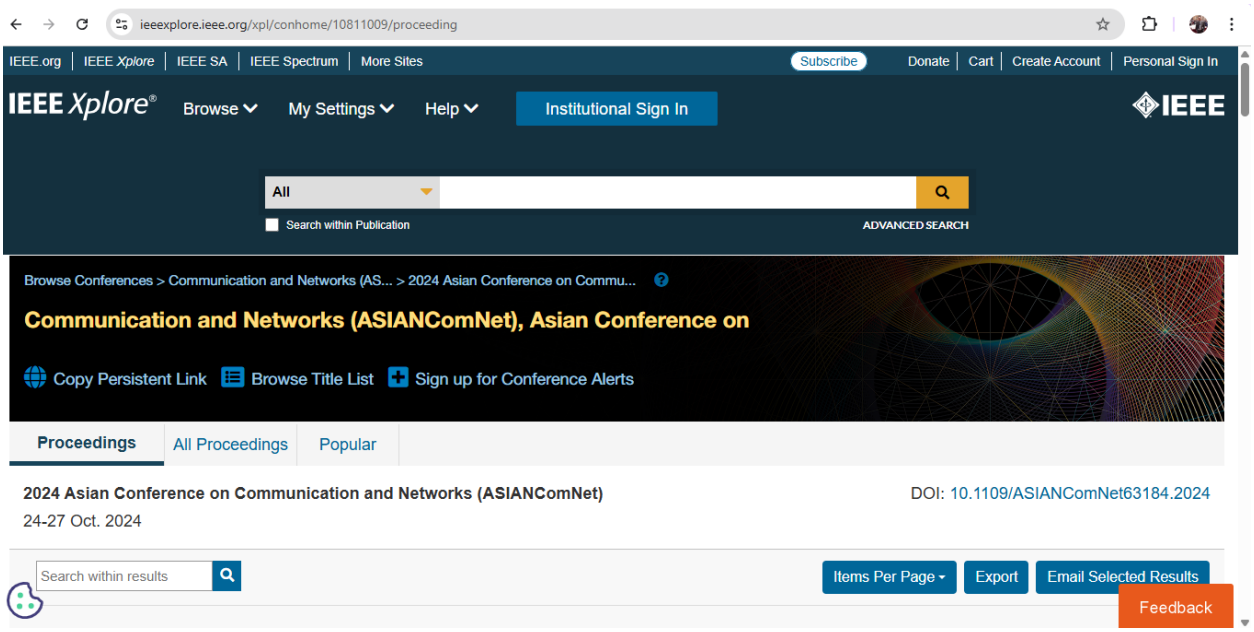

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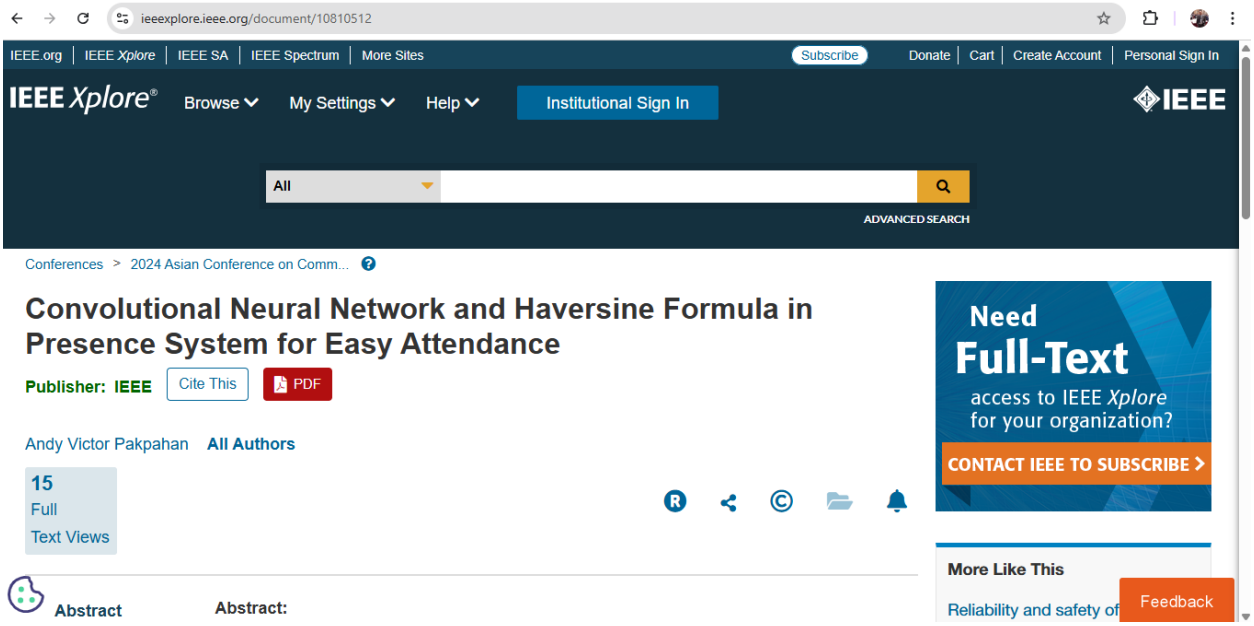

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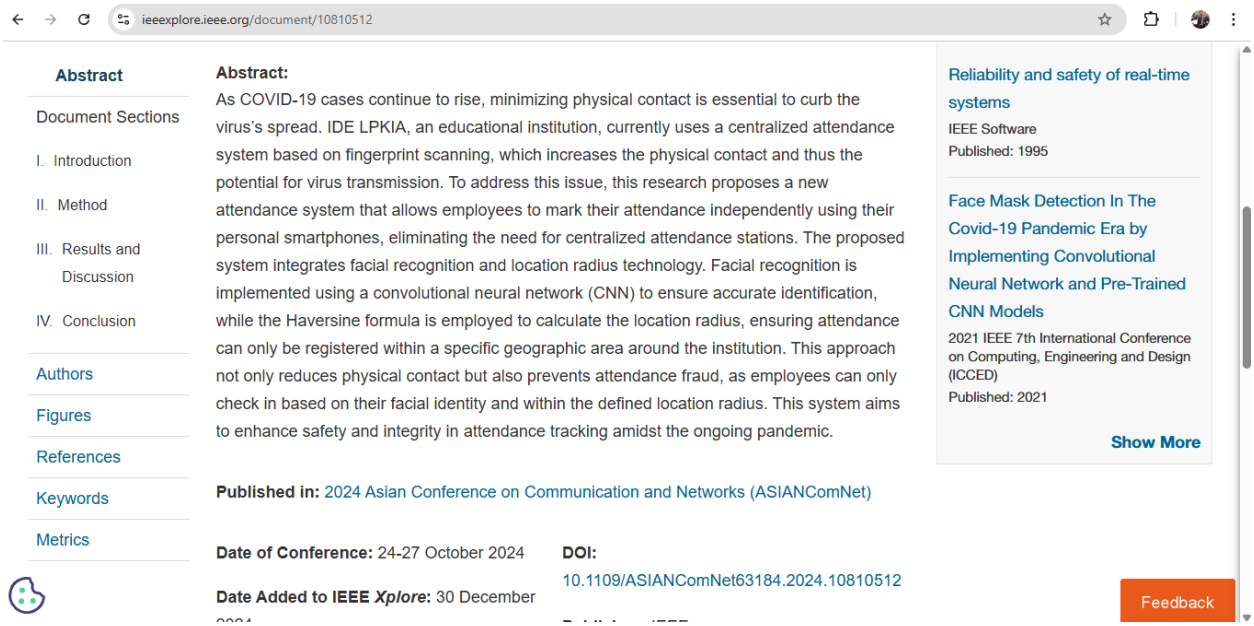


Date of Conference: 24-27 October 2024

DOI: 10.1109/ASIANComNet63184.2024.10810512

Date Added to IEEE *Xplore*: 30 December 2024

Publisher: IEEE

ISBN Information:

Conference Location: Bangkok, Thailand

I. Introduction

Currently, the number of the spread of COVID-19 is increasing, so a system is needed to reduce the spread of COVID-19. One place that is no exception is institutions, likes educational, health, office and government agencies. Therefore, the use of informa

important. Technology that is currently used in various aspects of hu on technology in everyday life [1]. This is also inseparable from the application of technology in the attendance system A concise and factual abstract is required [2, 3].

Authors

Andy Victor Pakpahan

Informatics Engineering, Institute Digital Ekonomi LPKIA, Bandung, Indonesia

Figures

References

ASIAN ComNet 2024

UNITED SOCIETIES OF SCIENCE

IEEE Thailand Section

IEEE COMPUTER SOCIETY Thailand Chapter

2024 ASIAN CONFERENCE ON COMMUNICATION AND NETWORKS

24-27 October 2024 Bangkok, Thailand

Program Book

Table of Content

1. Welcome

We welcome you to the 1st Asian Conference on Communication and Networks 2024 (ASIANComNet 2024). The first In-person and Virtual conference of ASIANComNet 2024 is held from 24th to 27th October 2024 at The Twin Towers Hotel, Bangkok, Thailand

ASIANComNet 2024 is organized and hosted by the United Societies of Science (USS) with the technical consultant by the Beyond 5G Wireless Innovation Center, Techno Park, King Mongkut's University of Technology North Bangkok (KMUTNB). It is also technically Co-Sponsored by the IEEE Computer Society Thailand Chapter and IEEE Thailand Section which enable the accepted and presented papers to appear in the IEEE Xplore Digital Library.

The theme of the conference is "THAI (TecHnology And Innovation) for a Smart Planet," and features tracks like Mobile computing, communications, 5G and beyond, IoT and applications, Privacy, Security for Networks, Dedicated Technologies for Wireless Networks, and Emerging Trends of AI/ML. The conference aims to serve as an international platform for promoting innovation, providing novel ideas, and discussing research works in the field of communications and networks. It also provides a forum for worldwide researchers, students, and Information Technology engineers to exchange research findings and experiences for a long-term partnership and collaboration. The ASIANComNet 2024 has attracted many participants from academic institutions and companies from more than 30 countries around the world and we would like to maintain and increase the number of countries and participants for further collaborations and conferences for the next year. As the Chair of the conference, I would like to thank all the Keynote Speakers, contributed authors, Organizing Chair, Finance Chair, Technical Program Chairs, International Advisory Committee, Students Outreach Committee, Publicity Chair, Publication Chair and the session chairs, and anonymous reviewers for their invaluable technical supports and local staffs for their very hard work to make this conference a success.

With all your support, we believe that ASIANComNet 2024 will be successful as a significant event as well as a memorable journey to Bangkok, Thailand. We hope you enjoy our technical programs and have a pleasant stay in Bangkok, Thailand.

Associated Professor Dr. Vitawat Sittakul

General chair of ASIANComNet 2024,
Head of Beyond 5G Wireless Innovation Center, KMUTNB

2. Service Information

2.1 Venue & Transport

The conference will be held at **The Twin Towers Hotel**.

Address: 88 Rong Muang Patumwan Bangkok 10330 Thailand
Tel : +66-2-216-9555 Fax : +66-2-214-5251

Transportation Options to The Twin Towers Hotel:

For your travel in Bangkok, using Grab is recommended as a cost-effective.

A. From Don Mueang International Airport:

Public Transportation: Board the A3 AC bus to Peninsula Plaza, then switch to the 15 REG bus to Srijulsap Building. From there, walk approximately 6 minutes to the hotel.

Taxi: A taxi ride will take about 40 minutes and cost around 350 THB.

B. From Suvarnabhumi Airport:

Public Transportation: Take the S1 AC bus to Phan Fa Pier, then catch the 15 REG bus to Wat Sam Ngam. Afterward, walk for about 5 minutes to reach the hotel.

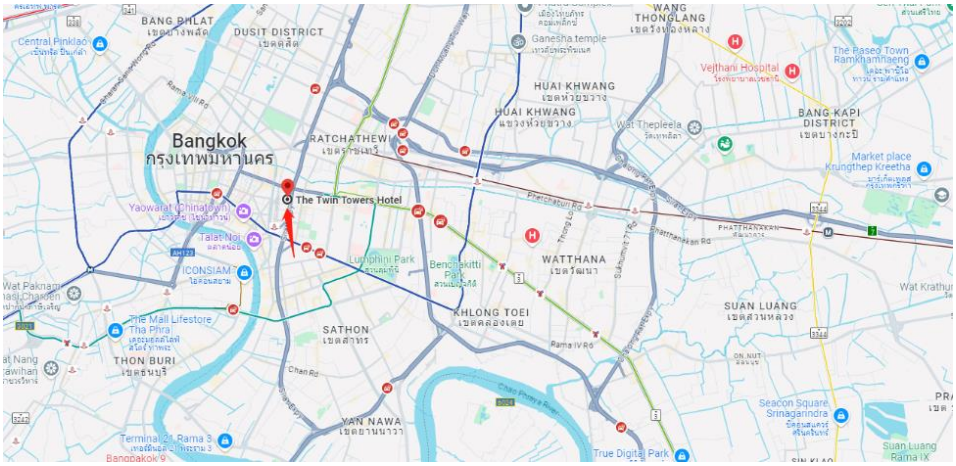
Taxi: Expect a taxi journey to last approximately 50 minutes and cost around 380 THB.

C. From Bangkok Hua Lamphong Railway Station:

Public Transportation: Ride the 2-9 REG bus to Wat Duang Khae Intersection and then walk for about 8 minutes to the hotel.

Taxi: A taxi trip will take roughly 4 minutes and cost around 60 THB.

Walking: The hotel is also within a 14-minute walking distance from the railway station.



2.2 Accommodation

Please refer to: https://asiancomnet2024.aconf.org/hotel.html

2.3 Food

Date		Time	Address
Oct. 25	Buffet Lunch	12:00-14:00	1st floor Lobby Area, the Twin Towers Hotel
	Dinner	19:00-21:00	Somboon Seafood(建兴酒家) (Bantadthong), Wang Mai, Pathum Wan, Bangkok 10330
Oct. 26	Lunch	12:00-13:30	In front of the meeting room
	VIP DINNER (Only Invited guest)	18:30-21:00	

From The twin Towers Hotel to Somboon Seafood (Bantadthong)

2.4 Weather

WED 10/23	34° 26°	A thunderstorm or two An evening t-storm or two	88%
WED 10/23	34° 26°	A thunderstorm or two An evening t-storm or two	88%
THU 10/24	34° 26°	Showers around in the p.m. A thunderstorm in spots	64%
FRI 10/25	34° 25°	A couple of thunderstorms A couple of thunderstorms	64%
SAT 10/26	32° 25°	Increasing cloudiness Partly cloudy	1%
SUN 10/27	32° 25°	Humid; a p.m. t-storm or two Rain and a thunderstorm late	66%

2.5 Contacts

Email: asiancomnet@usssociety.org

Website: https://asiancomnet2024.aconf.org

Whatsapp group	Wechat Group
https://chat.whatsapp.com/HWRmX5hM1hFJKsbgMvpNTz	

3. Participation Guidelines

3.1 Slides Requirements

It is recommended that your slides be formatted to a resolution of 1920px by 1080px. Additionally, please ensure that "ASIANComNet, United Societies of Sciences" is prominently displayed on your slides.

You can download the logos, banner, and key visual design from the following links:

https://file.aconf.org/conf/hk/2023/08/193601/files/designs_for_participants.zip

3.2 Oral Presentation

Speakers who give oral presentations on-site are recommended to upload slides on the website in the user dashboard (click the following link to visit directly).

https://asiancomnet2024.aconf.org/control.php/contribution.html

3.3 Virtual Presentation/Online Participation

The online conference room will be supported by Zoom. Please install Zoom and register your account in advance: https://zoom.us/zh-cn/download

Presenters/Listeners can access the online video conference room via the following portal, it also can be found on the program and timetable pages.

The participant code is required to access the meeting room. The participant code [8 chars] can be found on your dashboard of the conference website: https://asiancomnet2024.aconf.org/control.php/ticket.html.

Code	Session Block Name	Time	Portal
P1	Opening & Keynotes	10/25 08:30-12:00	https://www.aconf.org/o/331929.html
P2	Keynotes & Closing Ceremony	10/26 13:30-18:00	https://www.aconf.org/o/332289.html
RS1-1	Mobile computing, communications, 5G and beyond	10/25 14:00-17:15	https://www.aconf.org/o/332461.html
RS1-2	Dedicated Technologies for Wireless Networks	10/26 08:30-09:45	https://www.aconf.org/o/332469.html
RS1-3	Emerging Trends of AI/ML	10/26 09:45-11:30	https://www.aconf.org/o/332459.html
RS2-1	IoT and Applications	10/25 14:00-16:15	https://www.aconf.org/o/332465.html
RS2-2	Privacy, Security for Networks	10/25 16:15-17:45	https://www.aconf.org/o/332509.html
RS2-3	AI and Data Analytics	10/26 09:00-10:30	https://www.aconf.org/o/332473.html
RS2-4	Others	10/26 10:30-12:00	https://www.aconf.org/o/332475.html

3.4 Poster Presentation

There is no physical presentation on-site. However, authors are required to prepare slides and record a video of less than 10 minutes on the website.

All the posters can be browsed on the following page:

https://asiancomnet2024.aconf.org/timetable.html?session=196699

4. Program Overview

Bangkok/Asian UTC+7, Twin Towers Hotel, Bangkok

<table>
<tr><td colspan="2">October 24
Thursday</td><td colspan="2">14:00-20:00 Registration
The Hotel Lobby</td></tr>
<tr><td colspan="2"></td><td>Rong Muang, Floor 4</td><td>Bamrung Muang, Floor 4</td></tr>
<tr><td rowspan="5">October 25
Friday</td><td rowspan="4">AM</td><td colspan="2">08:30~12:00 [P1] Opening, Keynotes</td></tr>
<tr><td colspan="2">12:00-14:00 Buffet Lunch</td></tr>
<tr><td rowspan="2">14:00~17:15 [RS1-1] Mobile computing, communications, 5G and beyond</td><td>14:00~16:15 [RS2-1] IoT and applications</td></tr>
<tr><td>16:15~17:45 [RS2-2] Privacy, Security for Networks</td></tr>
<tr><td>PM</td><td colspan="2">18:00-20:00 Dinner</td></tr>
<tr><td rowspan="5">October 26
Saturday</td><td rowspan="2">AM</td><td>08:30~09:45 [RS1-2] Dedicated Technologies for Wireless Networks</td><td>09:00~10:30 [RS2-3] AI and Data Analytics</td></tr>
<tr><td>09:45~11:30 [RS1-3] Emerging Trends of AI/ML</td><td>10:30~12:00 [RS2-4] Others</td></tr>
<tr><td rowspan="3">PM</td><td colspan="2">12:00-14:00 Buffet Lunch</td></tr>
<tr><td colspan="2">13:30~17:30 [P2] Keynotes & Closing</td></tr>
<tr><td colspan="2">17:30-18:30 Steering Committee Meeting</td></tr>
<tr><td colspan="2"></td><td colspan="2">18:30-20:30 VIP Dinner</td></tr>
</table>

5. Timetable

R Registration

2024-10-24 14:00~20:00

Scan the QR Code for Timetable

14:00-20:00	Registration

P1 Opening & Keynotes

2024-10-25 08:30~14:00

Moderator: Dr. Prabagarane N		
8:30-8:40	Welcome Speech	
8:40-9:40	Keynote **Towards a Sustainable Digital Twin-based Network Architecture**	Giacomo Morabito Professor, University of Catania
9:40-10:00	Group Photo	
Moderator: Dr. Vitawat Sittakul		
10:00-11:00	Keynote **Post-Disaster Situation Analysis and Resource Management Using Delay-Tolerant Peer-to-Peer Wireless Networks**	Somprakash Bandyopadhyay Professor(retired), Indian Institute of Technology Bombay, Indian Institute of Management Calcutta
11:00-11:10	Coffee Break	
11:10-12:10	Keynote **5G Antenna Test Measurement in National Institute of Metrology, Thailand**	Sarinya Pasakawee Head of Laboratory and Senior Metrologist, National Institute of Metrology (Thailand)
12:10-14:00	Banquet Lunch & Rest	

P2 Keynotes & Closing Ceremony

2024-10-26 13:30~18:00

Moderator: Dr. Prabagarane N		
13:30-14:30	Keynote **5G/6G and its Association with Distributed Artificial Intelligence (DAI) Framework**	Ioannou Iacovos Professor, University of Cyprus
14:30-14:40	Coffee Break	
14:40-15:40	Keynote **Underwater Sensors and Its Applications**	S. Sakthivel Murugan Professor, NITTTR
15:40-15:50	Coffee Break	
15:50-16:50	Keynote **Artificial Intelligence Generative Tools, technology, challenges and its Applications in Education**	Ala' Khalifeh Professor, German Jordanian University, Amman, Jordan
16:60-17:20	Closing Ceremony	
17:20-18:20	Steering Committee Meeting (Committee Member Only)	
18:20-21:20	Technical Visit & VIP Dinner (Invited Person Only)	

RS1 Regular Session 1

RS1-1 Mobile computing, communications, 5G and beyond

2024-10-25 14:00~17:15
Location: Twin Towers Hotel Rong Muang, Floor 4

Session Chair: Dr. Prabagarane N (SSN, India)		
14:00-14:15	Oral **Distributed Radio Resource Allocation Using Deep & Federated Learning in 6G Networks**	Loannou Lacovos Professor, University of Cyprus
14:15-14:30	Oral **Evolutionary Stable Strategy enabled Resource Allocation in 6G: A Strategy Integration based Game Theoretic Approach**	Vivek Pathak Research Scholar Indian Institute of Technology Dharwad Rahul Jashvantbhai Pandya Assistant Professor Indian Institute of Technology Dhawad
14:30-14:45	Virtual **Driving Change: How Indonesian Taxi Company Utilize Mobile Applications**	Amalia Yaksa Parijata Student, LSPR Institute of Communication & Business
14:45-15:00	Oral **Direction of Arrival Estimation Using Modified Maximum Likelihood Function based on Nyström Method**	Raungrong Suleesathira Associate Professor, King Mongkut's University of Technology Thonburi, Thailand
15:00-15:15	Oral **Optimization of the D2D Topology Formation Using a Novel Two-Stage Deep ML Approach for 6G Mobile Networks**	Iacovos Ioannou Professor, University of Cyprus
15:15-15:30	Coffee Break	
Session Chair: Dr. Iacovos Ioannou (University of Cyprus, Italy)		
15:30-15:45	Oral **Inclusive Performance Analysis Of 100 Gbps PAM-4 at SerDes Using Digital Equalizers**	Gilad Katz Holon Institute of Technology
15:45-16:00	Virtual **Multi-Constraint Routing and Relay Scheduling Algorithms for Optical Networks**	Longjiang Li Associate Professor, University of Electronic Science and Technology of China
16:00-16:15	Virtual **Impact of Patch Array Antenna Size and Beampattern on Wireless Network Capacity**	Parmida Geranmayeh PhD student, Humboldt University of Berlin
16:15-16:30	Virtual **Offloading Performance for UAV-aided NOMA-MEC with WPT-enabled for IoT Networks**	Nguyen Gia-Huy FPT University

16:30-16:45	Oral **Enhanced DOA Estimation Using Eigenvalue Reconstruction and Toeplitz Preprocessing**	Shahzad Ali Master Student, Department of Electrical Engineering, Faculty of Engineering, Chulalongkorn University
16:45-17:00	Virtual **Performance Analysis of UAV Relay NOMA-MEC in IoT Network: Offloading and Optimization**	Nguyen Khai FPT University
17:00-17:15	Oral **RIS Aided Residual Energy: PS and TS Mode Harvesting in Cooperative Spectrum Sensing**	Santi P. Maity Indian Institute of Engineering Science and Technology, Shibpur

RS1-2 Dedicated Technologies for Wireless Networks

2024-10-26 08:30~09:45
Location: Twin Towers Hotel Rong Muang, Floor 4

Session Chair: Dr. Paleerat Wongchampa (KMUTNB, Thailand)		
8:30-8:45	Oral **Optical Advances in Skincare Technology**	Wai Yie Leong Senior Professor, INTI International University
8:45-9:00	Oral **Mixed Strategy to Cover a Convex WSN**	Mrinal Nandi Assistant Professor, West Bengal State University
9:00-9:15	Virtual **Bandwidth Estimation with Conservative Q-Learning**	Caroline Chen Tencent
9:15-9:30	Oral **An Improved Quantum Crossover Operator for Binary Evolutionary Optimization of Thinned Array Antennas**	Eleonora Lorenza Zich Graduated student, Politecnico di Torino
9:30-9:40	Coffee Break	

RS1-3 Emerging Trends of AI/ML

2024-10-25 09:35~12:00
Location: Twin Towers Hotel Rong Muang, Floor 4

Dr. Lerson Kirasamuthranon, KMUTNB, Thailand : Session Chair-Oral; Dr. Sabyasachi Bhattazharyya : Session Chair-Virtual		
9:35-09:50	Oral **A Reinforcement Learning Based Strategy for Optimal Placement of Electric Vehicle Charging Stations in Smart City for Urban Planning**	Santi Prasad Maity Professor, Indian Institute of Engineering Science and Technology, Shibpur
9:50-10:05	Virtual **Determinants of HR Analytics Adoption: Exploring the Role of Organizational Culture Among HR Professionals**	Jefta Harlianto Senior Lecturer, BINUS University
10:05-10:20	Virtual **Predicting software energy consumption using time-series based recurrent neural network with Natural Language Processing on Stack Overflow Data**	Deepajothi S Assistant Professor, SRM Institute of Science and Technology
10:20-10:35	Virtual **Proactive Phishing Defense: A URL Classification System Using Machine Learning**	Samer Jawad Researcher, Aliraqia University
10:35-10:50	Oral **I-POWERED DIGITAL ASSISTANTS: REVOLUTIONIZING BUSINESS OPERATIONS AND THE FUTURE OF SECRETARIAL WORK**	Bertha Musty Lecture, Institut DIgital Ekonomi LPKIA
10:50-11:05	Virtual **The Emerging Trend AI in Public Relations and Journalism in Indonesia**	Akhmad Aruman Lecturer, LSPR Institute of Communication & Business
11:05-11:20	Virtual **Advanced Breast Cancer Diagnostics through a Comparative Analysis of SVM, Random Forests, and Neural Networks in MRI Image Analysis**	Sreekanth Yalavarthi Senior Program Manager, HCL America Inc
11:20-11:35	Virtual **2D Guided 3D Gaussian Segmentation**	Kun Lan University of Science and Technology of China
11:35-11:50	Virtual **Defense of Ethical Behaviour, Integrity and Freedom of Thoughts**	Cristina Brasi Psychologist, FBA-LAB Costanza Matteuzzi Psychologist, FBA-LAB
11:50-12:00	Oral **Human-Centered Design in UI/UX for E-Promotion in Indonesia's Smart Cities: Empowering Culinary Tourism with AI**	Neng Susi Susilawati Sugiana Student, Universitas Pendidikan Indonesia

RS2 Regular Session 2

RS2-1 IoT and applications

2024-10-25 14:00~16:15
Twin Towers Hotel Bamrung Muang, Floor 4

Dr. Sarinya Pasakawee, National Institute of Metrology, Thailand - Oral Session Chair; Dr. R. Kishore - Virtual Session Chair		
14:00-14:15	Oral **Implementing IoT in Water Level Management: Reservoir Monitoring and Flood Mitigation**	Paleerat Wongchampa KMUTNB
14:15-14:30	Oral **The Classification and Objective Measure of Strength of an Exercise via Analysis of Electromygraphy**	Panusorn Hanchaikul Student, Shrewsbury International School Minchaya
14:30-14:45	Oral **IoT Based Smart Home Using Virtual Key**	Edna Elizabeth.N Professor, Sri Sivasubramaniya Nadar College of Engineering
14:45-15:00	Virtual **RFID Highway Sensing in Malaysia**	Wai Yie Leong Senior Professor, INTI International University
15:00-15:15	Virtual **IMAGE ANALYSIS FOR TURNING DEFECT OF COMMUTATOR SURFACE**	Zhong-Ping Shao Ph. D. Candidates, Huafan University
15:15-15:30	Oral **Enhancing Security in Online Learning Platforms: Implementing IoT-Based Two-Factor Authentication for TOEFL ITP MOOCs**	Haris Haris Doctoral Student, Jakarta State University
15:30-15:45	Oral **IoT-Enabled Poultry Farming: Innovations in Automation and Monitoring**	Wai Yie Leong Senior Professor, INTI International University
15:45-16:00	Oral **Using Fog Computing to manage data confidentiality in the Internet of Things: the case of an electronic bracelet to relieve prison overcrowding in Senegal**	GAYE Dr Abdourahime Lecture, University Alioune DIOP Bambey
16:00-16:15	Coffee Break	

RS2-2 Privacy, Security for Networks

2024-10-25 16:15~17:45
Twin Towers Hotel Bamrung Muang, Floor 4

Session Chair: Dr. Prof. N. Edna Elizabeth (SSN, India)		
16:15-16:30	Oral Strategies for Identifying Online Scams	Wai Yie Leong, Senior Professor INTI International University
16:30-16:45	Virtual MITM and Differential Fault Attack on ULBC	Mrinal Nandi, Research Scholar West Bengal State University
16:45-17:00	Oral CONVOLUTIONAL NEURAL NETWORK AND HAVERSINE FORMULA IN PRESENCE SYSTEM FOR EASY ATTENDANCE	Andy Victor Pakpahan, Lecture Institut Digital Ekonomi LPKIA
17:00-17:15	Virtual Conception of an Autonomous Dynamic Analysis System for Android Malwares	Ahmed Mehaoua Université Paris Cité
17:15-17:30	Virtual Denial of Firewalling Attacks (DoF): Detection, Defense and Challege	Liu Liang Civil Aviation University of China
17:30-17:45	Virtual Deception-Based Proactive Defense Against Ransomware in VMWare ESXI Systems	Hai-Ha Tran, Students FPT University

RS2-3 AI and Data Analytics

2024-10-26 09:00~10:30
Twin Towers Hotel Bamrung Muang, Floor 4

Session Chair: Dr. Associate Prof. Ambar Bajpai (GITAM, India)		
09:00-09:15	Oral Multi-Criteria Decision Analysis for Optimal Internet Service Provider Selection using Calibrated Random Forest	Abhijit Bhowmik Associate professor, American International University Bangladesh
09:15-09:30	Virtual The trend of high microbial contamination in livestock milk in the ASEAN region and distribution mapping	Endi Hari Purwanto Researcher, National Research and Innovation Agency
09:30-09:45	Oral Symbolic Dialogue for General Domain State Tracking	Hung Nguyen Quoc Student, FPT University
09:45-10:00	Virtual Analysis of Neural Network Inference Response Times on Embedded Platforms	Patrick Huber Technical University of Munich, University of Applied Sciences Kempten
10:00-10:15	Oral The impact of varying knowledge on Question-Answering system	Anh Nguyen Ha Student,FPT University
10:15-10:30	Coffee Break	

RS2-4 Others

2024-10-26 10:30~12:00
Twin Towers Hotel Bamrung Muang, Floor 4

Session Chair: Dr. Associate Prof. Ambar Bajpai, GITAM, India		
10:30-10:45	Oral **Low-Profile Omnidirectionally Radiated Microstrip Antenna for LEO Satellite Swarm Communication**	Seongmin Pyo Professor, Hanbat National University
10:45-11:00	Virtual **Advancements in Lung Cancer Diagnosis: A Comprehensive Study on the Role of PCA, LDA, and t-SNE in Deep Learning Frameworks**	Vikas B Koneru Lakshmaiah Education Foundation, Bowrampet
11:00-11:15	Oral **Circularly-Polarized Monopolar Microstrip Antenna for Future Smart Mobility Communication**	Pyo Seongmin Professor, Hanbat National University
11:15-11:30	Virtual **Automating citation formatting in scientific publications using ChatGPT**	Aldeniz Rashidov Director of CEDO, Technical University of Gabrovo
11:30-11:45	Virtual **Measuring Digital Technology Readiness in Manufacturing Small and Medium Enterprises (SMEs) in Indonesia**	Syandi Negara Researcher,National Research and Innovation Agency, Dadang Ramdhan National Research and Innovation Agency
11:45-12:00	Oral **Optimizing YOLOv8 for Efficient Tomato Recognition in Greenhouse Environments Using Drone Imagery**	Oleg Shovkovyy, University Lecturer CMKL
12:00-12:15	Virtual **The Impact of Technology and Other Working Relevant Factors on Worker′ s Performance during the Covid-19 Pandemic in Indonesia**	Dadang Ramdhan Researcher Telkom University, National Research and Innovation Agency
12:15-12:30	Oral **A Survey on Wheat Disease Identification and Classification Using Deep Learning**	S M Naveen Raja, Research Scholar Noorul Islam Centre for Higher Education
12:30-12:45	Virtual **Overall Design and Physical Validation of Voice Interaction based on the ChatGPT Humanoid Robot Brain**	Liang Yan Amileyuan Intelligent Technology (Beijing) Co., LTD

PS Poster Session

2024-10-25 09:00~18:00

Session Chair: Dr. Sabyasachi Bhattacharyya, SSN

ID	Title
154	Poster **Improved VANETs Routing with Particle Swarm Optimization to Maximize Quality of Service** Hayder Shihab Ahmed Alsoufi Federal Board of Supreme Audit
126	Poster **Integrating Local and Global Frequency Attention for Multi-Teacher Knowledge Distillation** Mr. Zhidi Yao Hosei University
153	Poster **Trust based Relay Node Selection and Efficient Multi-hop Clustering for VANETs** Hussein Muhi Hariz Mazaya University College
68	Poster **A physics-embedded deep learning framework for cloth simulation** Zhiwei Zhao, Student UM-SJTU Joint Institute, Shanghai Jiao Tong University
152	Poster **A Hybrid Traffic Management in SDN-enabled Multi-Layer VANET Network** Hussein Muhi Hariz Mazaya University College
67	Poster **Improved YOLOv5 based on attention mechanism and FasterNet for foreign object detection on railway and airway tracks** Zongqing Qi, Computer Science Stevens Institute of Technology, Hoboken NJ, U.S
151	Poster **Effective Spectrum Allocation with Priority Function and Multipoint Relay based Routing in VANETs** Siva Shankar S KG Reddy College of Engineering and Technology
66	Poster **Random forest-based intrusion detection system** Bojun Song Shaanxi University of Science and Technology
150	Poster **Overhead Aware Resource Allocation with Cluster based Network Construction in VANETs** Hussein Muhi Hariz Mazaya University College
149	Poster **Distributed Self-Localization with Improved Optimization with machine learning in IoT Applications** Zahraa Hameed Jaber Teacher, National University of Science and Technology
148	Poster **A Proactive Collaborative Scheme for VANETs to Attain Maximum Throughput and Energy Efficiency** Hussein Al-Aboudy Mazaya University College
147	Poster **Dynamic Mobility based Effective Load Balancing and QoS-Aware Network Selection in UAV Networks** Hussein Al-Aboudy Mazaya University College
146	Poster **A Hybrid Multi-Agent Adaptive Clustering Algorithm Using Whale Optimization in VANETs Network** Zahraa Saad Abdulali National University of Science and Technology
145	Poster **Cluster Head Selection and Data Dissemination with Multicast Protocol in Vehicular Communication** Mohammed Ihsan The Islamic University

ID	Title
144	Poster **Deep Learning Analysis and Detection of Functional Genomics in Druggable Human Genes across the Genome** A. Manimaran Associate Professor, College of Engineering and Technology Chengalpattu
143	Poster **Augmenting cyber security in WSN: AI-based clone attacks recognition framework** Seelam Ch Vijaya Assistant Professor, MVSR Engineering College
142	Poster **Improving power allocation and installation in WSN using novel nature-inspired optimization for cyber security applications** Balamurugan K.S. Karpaga Vinayaga College of Engineering and Technology
141	Poster **Revolutionizing cyber security in WSN: ML-driven data sensing and fusion** Tabarek Hasanain AlDaami Altoosi University College
140	Poster **Protection of routing in WSN: Efficient path planning using block chain-assisted dynamic waterwheel plant optimization technique for applications of cyber security** A. Manimaran, Associate Professor, College of Engineering and Technology Chengalpattu
25	Poster **Reliable Data Transmission and Efficient Vehicle Path-Planning in Cooperative Vehicular Networks** Mohammed Habelalmateen The Islamic University
19	Poster **Energy consumption modeling and Grey Wolf Optimization for vehicular communication** Mohammed Habelalmateen The Islamic University
18	Poster **Resource Management and GA based scheduling for Unmanned-Aerial-Vehicles Communications** Zahraa Hassan Mazaya University College
11	Poster **Experimental Demonstration of Latency Aware Optimization for Collaborative UAV-Aided VANET** Mohammed Habelalmateen The Islamic University
10	Poster **Experimental Demonstration of Data Collection System and Effective Relaying Model in UAV network** Mohammed Habelalmateen The Islamic University
5	Poster **Improved Routing with Multi-channel Clustering in Vehicular Communication** Ali Muhamed Ministry of Higher Education and Scientific Research

6. Conference Organizing

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7. About USS

The United Societies of Science (Abbr.: USS, from now on referred to as USS) is a cross-border community for scientists and researchers with openness, equality, and inclusion. It was established in 2023, and registered in Hong Kong. USS is a borderless, non-profit, non-governmental organization and its place of registration can be changed due to development needs.

For the USS, "science" mainly refers to science, technology, engineering, medicine, management, and social sciences. USS believes that humanities and arts also belong to the category of "science" and are of great significance to human development. Due to the USS's capabilities, the USS did not cover pure humanities and arts-related disciplines when it was born, except for interdisciplinary subjects. This does not imply that the USS will not cover humanities and arts disciplines in the future.

Missions & Vision

Promote the integrated development of global scientific research and human well-being by facilitating the exchange and sharing of knowledge and cross-border collaboration.

Openness

1) Legal entities and unincorporated organizations (universities, enterprises, research institutes, laboratories, associations, societies, councils, and committees, etc.) and individuals in any industry and academia in any country and region are free to join and withdraw from USS.

2) Provided that it is conducive to the advancement and dissemination of science, USS is open to cooperation with any entity or individual from any country or region.

Equality

1) All members have equal rights to participate in community activities and vote.

2) Oppose academic bullying between people, institutions, and countries, and resist the academic clique system.

3) Encourage scholars and institutions in developed countries to support scientific research development in less developed regions.

4) Encourage scholars in less developed regions to have more opportunities to

express and learn.

Inclusion

1) Oppose discrimination and hatred, and encourage exchanges and cooperation under the condition of mutual respect.

2) Diverse academic perspectives are encouraged, and debates are welcome. Slander and attacks are strictly prohibited.

3) Encourage underdeveloped scientific research countries/territories to actively participate in USS activities, and encourage developed scientific research countries/territories to provide support and assistance to underdeveloped countries/territories.

Service Scope

USS service scope

1) Organize global or regional academic activities;

2) Build electronic libraries and knowledge bases, and provide knowledge services;

3) Organize the dissemination and transformation of scientific research achievements;

4) Develop standards, guidelines, and specifications to promote the advancement and dissemination of scientific knowledge;

5) To provide sponsorship, including technology, financial, and logistical support, to researchers for organizing academic conferences;

6) To provide sponsorship, including IT technology, financial, and logistical support, to researchers for launching journals;

7) To facilitate the establishment of scientific societies and councils under USS;

8) To provide free IT support and website hosting to academic societies, associations, councils, and committees, equipping them with all essential modules and functions for organizing activities, such as membership management, conference management, subscription services, journal website hosting, and knowledge base archives.

9) To establish awards, organize prize evaluation committees, and conduct the award selection

United Societies of Science

A cross-border community for scientists and researchers with openness, equality, and inclusion.

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