

## UTILIZATION OF ARTIFICIAL INTELLIGENCE (AI) TECHNOLOGY IN THE DIGITIZATION OF MSMEs IN CILEGON CITY

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### Abstract

Digitalization has become a primary necessity for Micro, Small, and Medium Enterprises (MSMEs) to thrive and grow in the digital era. In the city of Cilegon, many MSMEs still rely on traditional methods, which causes them to lag slightly behind in the digital market. Through this community service activity, training and assistance were provided on utilizing Artificial Intelligence (AI) technology in various business aspects, such as digital marketing, financial management, and product branding. The solution offered was AI education tailored to the specific needs of business owners. The results showed an increase in participants' knowledge and skills in using technology to support operations and enhance the competitiveness of local products. In conclusion, the use of AI contributes positively to encouraging the digital transformation of MSMEs, improving business efficiency, and sustainably expanding market reach.

**Keywords:** MSME Digitalization, Artificial Intelligence (AI), Local Economic Empowerment

### INTRODUCTION

In today's digital era, technology has become a major necessity in driving business growth and sustainability. Micro, Small, and Medium Enterprises (MSMEs) as drivers of the national economy have a strategic role in creating jobs, increasing community income, and strengthening local economic resilience. However, many MSMEs still operate in traditional ways and have not made optimal use of digital technology. This is a challenge as well as an opportunity in an effort to increase their competitiveness in an increasingly competitive market.

One of the solutions that is now being widely introduced is the use of **Artificial Intelligence (AI)** technology. AI can be used by MSMEs for various needs, such as digital marketing automation, financial management, stock management, and data-based customer service. The use of AI not only makes business processes more efficient but also opens up MSME access to a wider market, including national and global digital markets.

Unfortunately, the awareness and understanding of MSME actors on the great potential of AI is still very limited, especially in areas such as Kerenceng Village, Cilegon City. Business actors in this region are mostly not familiar with digital technology and still rely on

conventional methods. The limitations of digital literacy have an impact on low innovation, weak product competitiveness, and suboptimal daily business operations.

For this reason, this community service activity is present as an empowerment effort that is practical and solution-oriented. Through a direct training and mentoring approach, MSME actors are introduced to the basic concept of AI and its implementation in business activities. These activities not only target increased knowledge, but also practical skills, such as creating promotional content with AI, designing digital logos and branding, and analyzing market trends using simple data.

With the increase in technology literacy and digital skills, it is hoped that MSMEs in Kerenceng Village will be able to transform towards a more adaptive, efficient, and competitive business. Furthermore, collaboration between universities, the government, and the community is the key to creating a digital ecosystem that supports the sustainable growth of MSMEs.

## IMPLEMENTATION METHOD

This community service activity will be carried out from December 2024 to May 2025 in Kerenceng Village, Cilegon City.

In an effort to answer the challenge of low use of digital technology by MSME actors in Kerenceng Village, this service activity is designed through a systematic and participatory approach. The process began with a **preliminary study**, in the form of direct observation and informal interviews with local business actors. The service team also conducts a literature review of relevant references to strengthen understanding of the context of the problem and adjust the approach to the characteristics of the target community.

From the results of field exploration, it was found that most MSMEs still rely on conventional methods in operations and marketing. Lack of access to information and lack of digital skills are the main obstacles. For this reason, the formulation of the problem is focused on low technological literacy, especially related to the use of **artificial intelligence (AI)** as a business tool. This problem not only has an impact on limited market reach but also reduces the overall efficiency and competitiveness of MSMEs.

In response to these problems, the implementation method is arranged in three main approaches: **interactive lectures**, **group discussions**, and **direct mentoring**. The lecture was used to introduce the basic concept of AI and its applications in the context of MSMEs. The discussion focused on exploring the needs of participants and developing a simple digital strategy. Meanwhile, the practical sessions were directed at the direct use of tools such as Canva, ChatGPT, and Google My Business, so that participants could directly apply the knowledge gained to their business.

This activity targets six MSME actors who were selected selectively based on product variety and readiness to innovate. Although the number is limited, the intensive approach method is expected to be able to produce a significant impact and become a model that can be replicated for other MSMEs in the surrounding area.

This program has a close relationship with various parties. For MSME actors, this activity increases digital capacity and opens up new economic opportunities. For local governments, this activity supports the agenda of economic empowerment and digital transformation of the

informal sector. As for Faletihan University, this activity is a tangible form of implementing the Tri Dharma of Higher Education and strengthening the cross-sector service network. Ongoing collaboration between stakeholders is key to ensuring the sustainability and long-term impact of the program.

## **RESULTS AND DISCUSSION**

Based on the goal of economic growth and by paying attention to the obstacles faced in achieving the goal, we strive to optimize the use of AI in MSME actors so that it can support optimal economic growth.

The program plans that will be implemented include:

1. Survey MSMEs
2. Giving questionnaires to MSME actors in Cilegon City regarding the use of AI

The strategy of implementing AI among MSMEs can improve the function and role of MSME actors as economic managers, improve cooperative relationships, coordinate with MSME actors, utilize internal coordination, and foster harmonious cooperative relationships with elements of society. Increase cooperation with both the government and non-government, as well as with organizational institutions.

To achieve optimal and quality results, it is hoped that the application of the use of AI to MSME actors is not oriented towards seeking financial benefits alone, but must lead to the quality of work results. Therefore, as a first step, the formation of a committee for the procurement of the use of AI for MSME actors involving all related elements, consisting of government or non-government elements and organizations, so that the implementation of this AI program can run smoothly, effectively, and efficiently as well as transparently.

This community service activity shows that the use of Artificial Intelligence (AI) technology has a positive impact on Micro, Small, and Medium Enterprises (MSMEs) in Kerenceng Village, Cilegon City. Before the activities were carried out, most MSME actors were still running their businesses traditionally, without the use of digital technology. This causes limitations in marketing, business management, and low product competitiveness in the wider market.

After training and mentoring, there was a significant increase in participants' understanding of the benefits of AI technology. Some participants are starting to be able to use platforms such as Canva for promotional design, ChatGPT for product descriptions, and utilize social media to expand market reach. Not only that, participants were also introduced to the importance of data analytics in reading market trends and consumer behavior.

The implementation of AI technology turns out to be beneficial not only in the marketing aspect but also in operational efficiency. For example, business actors are starting to recognize the benefits of digital financial recording applications that can help them calculate the cost of production, net profit, and projected stock of goods. This understanding is the first step towards more structured and professional business management.

Although the change did not happen instantly, there was a high enthusiasm and desire to learn from the participants. This is an important indicator that service activities have had a real

social impact. For these results to be sustainable, further training and the formation of technology-based MSME learning groups are needed that can share good practices with each other. Thus, the use of AI is not only a temporary tool, but also part of the MSME work system in the long term.

## CONCLUSION

Based on the series of community service activities that have been carried out, it can be concluded that the use of artificial intelligence (AI) technology has great potential in encouraging the digital transformation of MSME actors in Kerenceng Village, Cilegon City. During the activity, business actors showed enthusiasm and openness to new knowledge, especially in terms of applying technology to support their business activities.

The introduction and hands-on practice of using AI-based tools, such as design applications and smart chatbots, has opened up new insights for participants on how to promote products, manage businesses more efficiently, and reach markets more broadly and strategically. This is proof that when training is delivered in the right and relevant method, MSME actors can adapt, even starting to show a willingness to innovate.

AI is not just a technology trend, but a tool that can be used by MSMEs to overcome limited resources and increase competitiveness. By optimizing this technology, MSMEs will not only survive amid fierce digital competition but also have the opportunity to develop further. This service activity also shows that collaboration between universities, the community, and local governments is the main force in supporting a sustainable empowerment ecosystem.

As a follow-up, we recommend that MSME actors continue to be given access to learning on a regular basis, both through advanced training, discussion forums, and ongoing technical assistance. Local governments are also expected to provide support in the form of policies that encourage the digitalization of MSMEs, including easy access to technological infrastructure.

On the other hand, MSME actors need to maintain the spirit to continue learning and adapting. With active involvement, they can not only create more quality and attractive products, but also be able to provide faster, more accurate, and more accurate services according to the needs of the times. Innovation is key, and technology is a bridge. Hopefully, this synergy will continue for the sake of a more inclusive and resilient local economy.



**Figure 1. MSMEs Cracker Rambak**

Source: Personal Documentation

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