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AI-Powered Branding by Utilizing ChatGPT for the Promotion of Competitive MSMEs (SDGs9)

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ABSTRACT

Karangsong Village in Indramayu Regency holds substantial economic potential in the fisheries, tourism, and creative industry sectors. However, more than 70% of Micro, Small, and Medium Enterprises (MSMEs) in the village still rely on conventional marketing methods. Only around 30% utilize social media, and less than 10% have adopted digital branding strategies effectively. The main challenges faced by these MSMEs lie in the areas of production, business management, and marketing particularly in terms of product quality standardization, financial recordkeeping, inventory management, and the implementation of effective digital promotion strategies. This community engagement program aims to enhance the competitiveness of MSMEs through the application of Artificial Intelligence (AI), particularly by utilizing the ChatGPT platform as a tool to improve the efficiency and quality of digital branding. The program is conducted in four stages: socialization to introduce the concept of AI and ChatGPT, technical training and mentoring, monitoring and evaluation of AI implementation outcomes, and the preparation of a final report along with sustainability recommendations. The solutions offered include using ChatGPT to recommend product innovations, develop business plans, generate promotional content, write social media copy, and create customer engagement chatbots. University students are actively involved in the implementation of the program, in alignment

with the Merdeka Belajar Kampus Merdeka (MBKM) initiative. Additionally, the program supports the achievement of Sustainable Development Goal (SDG) 9, which focuses on Industry, Innovation, and Infrastructure. The expected outcomes include AI-based marketing strategies that are practical and implementable for MSMEs, as well as enhanced customer engagement through digital media. This initiative is expected to strengthen the digital capacity of Karangsong's MSMEs in facing the challenges of the digital economy.

1. Introduction

In the era of the digital economy and Industry 4.0, the ability of Micro, Small, and Medium Enterprises (MSMEs) to adapt to technological transformation is crucial for their survival and competitiveness (Arisena et al. 2024). Globally, digital branding and artificial intelligence (AI) have become key drivers for business growth, especially in enhancing market reach and customer engagement (Nalbant & Aydin 2023). However, many MSMEs, particularly in developing regions, are still left behind in adopting these innovations. This gap is evident in Karangsong Village, Indramayu Regency, West Java an area with significant economic potential in fisheries, tourism, and the creative industries. Despite being a leading tourist destination in the region, over 70% of MSMEs in Karangsong still rely on traditional marketing methods, with limited use of digital branding and media platforms. Only about 30% utilize social media, and fewer than 10% have implemented structured digital branding strategies. These issues reflect broader global development challenges, particularly those outlined in Sustainable Development Goal (SDG) 9: Industry, Innovation, and Infrastructure, which emphasizes the importance of inclusive and sustainable industrialization supported by innovation and technology. Additionally, this challenge intersects with SDG 8: Decent Work and Economic Growth, as MSME development is a crucial pillar in driving local employment, entrepreneurship, and productivity.

Literature on AI-powered marketing confirms that integrating technologies such as ChatGPT into business practices can significantly enhance branding, content creation, and customer service efficiency (Wagobera Edgar Kedi et al. 2024). Studies show that MSMEs using AI-based branding strategies experience increased customer engagement and faster promotional response rates compared to conventional approaches (Mary Arul Mathy 2025). Nevertheless, a majority of MSMEs in rural or underdeveloped areas lack the resources and technical knowledge to implement these tools, often due to the absence of dedicated digital marketing teams and skills in copywriting or content planning (Mutia Dawis et al. 2024)(Juriah & Susilastuty 2024). This gap highlights the urgency for targeted interventions that provide practical solutions and capacity-building for MSMEs.

Community-based digital transformation initiatives have shown promise in closing this gap, particularly when digital tools are embedded within local capacity-building and participatory frameworks (e.g., youth digital ambassador programs or rural e-commerce hubs). Yet, very few programs have explicitly adopted AI tools such as ChatGPT for branding empowerment at the grassroots level highlighting a critical opportunity for innovation in community service. This community service program introduces a novel approach by leveraging ChatGPT to support AI-powered branding for MSMEs. The program offers integrated training and mentoring to help MSMEs create marketing content, automate customer services, and develop cohesive brand identities

using AI tools. This solution is innovative not only in its application of AI for community-scale business development but also in its integration of students as facilitators through the Merdeka Belajar Kampus Merdeka (MBKM) framework.

The objective of this program is to enhance MSMEs' understanding and ability to utilize AI-based branding strategies that can improve digital visibility, customer interaction, and overall business resilience. In particular, this article aims to describe the process, outcomes, and best practices from the implementation of the program, highlighting how digital transformation can be driven from the grassroots level. The contribution of this article lies in two key areas: (a) it adds to the body of knowledge regarding AI utilization in MSME development and community-based digital transformation, and (b) it supports the achievement of SDG 9 and SDG 8 by promoting inclusive access to technology and economic opportunity in local economies. Furthermore, the program demonstrates the potential for replicability and scalability in other rural communities or sectors, offering insights for broader policy formulation and digital inclusion strategies.

2. Methods

This community service program was conducted in Karangsong Village, Indramayu Regency, West Java, a coastal area with a strong presence of Micro, Small, and Medium Enterprises (MSMEs) in the culinary, handicraft, and tourism sectors. The target community consisted of approximately 30–40 MSMEs, most of which lacked digital literacy and effective marketing capabilities. Based on the initial mapping, over 70% of participating MSMEs had no structured digital branding strategy, and only around 30% were passively using social media without content planning. The majority of MSME owners were women (about 65%), reflecting a gender-inclusive community dominated by family-based enterprises with modest socioeconomic conditions.

The community was actively involved across all stages of the program, including needs assessment, training sessions, and program evaluation. Participants registered voluntarily, provided input on their business challenges, engaged in hands-on sessions, and contributed feedback for refinement. The implementing team comprised: One program leader with expertise in digital business and AI implementation, One academic staff member specializing in community empowerment and content development, Two undergraduate students from the Digital Business Program who served as facilitators and data collectors.

Student participation was aligned with the Merdeka Belajar Kampus Merdeka (MBKM) framework and credited academically based on their contributions to facilitation, data handling, and field coordination. The implementation followed a four-stage method over a 4-week period:

- Preparation and Planning (Week 1):
Activities included stakeholder meetings, mapping of target MSMEs, collection of baseline data on digital branding capacity, development of training modules, and logistical preparations (e.g., laptops, projectors, mobile data access).
- Socialization and Training (Week 2):
Participants were introduced to the importance of digital branding and the use of ChatGPT. The session included a demonstration and practical exercises on content creation, product description writing, and automated customer interaction using ChatGPT.
- Monitoring and Evaluation (Week 3):
Data were gathered using feedback forms, pre/post surveys, and observation of participant engagement. The pre/post surveys consisted of 10 items using a 5-point Likert scale (e.g.,

confidence in using digital tools, understanding of branding concepts), along with 2–3 open-ended questions capturing qualitative insights.

- Reporting and Reflection (Week 4):

The team compiled a final report, analyzed participant outcomes, documented testimonials, and formulated follow-up recommendations based on MSME feedback.

The core technological solution introduced was ChatGPT, applied as an AI-based tool for branding assistance. It was used to generate promotional content, design customer interaction scripts, and assist in chatbot-style automation for MSMEs. Supporting tools included laptops, smartphones, internet access, and printed learning materials. Evaluation instruments comprised attendance logs, pre/post surveys, samples of content created by participants, and satisfaction questionnaires. The surveys assessed both cognitive (knowledge gain) and behavioral (confidence in using AI tools) dimensions.

Data collection employed a triangulated approach involving: Structured questionnaires (Likert + open-ended), Observation during practice sessions, Informal interviews for contextual understanding. Success indicators were defined as: Increase in the number of MSMEs successfully creating AI-generated content (target: >50% improvement from baseline), Measurable increase in understanding of digital branding principles (based on pre/post scores), Active engagement during training sessions (based on facilitator logs and attendance), Positive feedback on the usefulness and relevance of ChatGPT for their business needs.

A mixed-method analysis was applied. Descriptive qualitative techniques interpreted participant narratives and behavior change, while simple quantitative summaries (percentage increases, participation rates) illustrated measurable outcomes. This integrated approach allowed for a comprehensive evaluation of program impact.

3. Result and Discussion

This community service program was implemented on June 11, 2025, in Karangsong Village, Indramayu Regency, West Java, with Universitas Negeri Jakarta (UNJ) as the executing institution. Karangsong is a designated priority development area under the partnership of the Faculty of Economics and Business, UNJ. Located approximately 224 kilometers from the university, the village was chosen due to its MSME potential across culinary, tourism, and handicraft sectors. The activity titled “AI-Powered Branding with the Utilization of ChatGPT for Competitive MSME Promotion” aimed to enhance the digital branding capacity of MSMEs through exposure to AI tools and practical training in prompt engineering. The approach was rooted in the need to bridge the gap between the potential of AI-based digital marketing and the limited digital literacy among rural MSMEs.

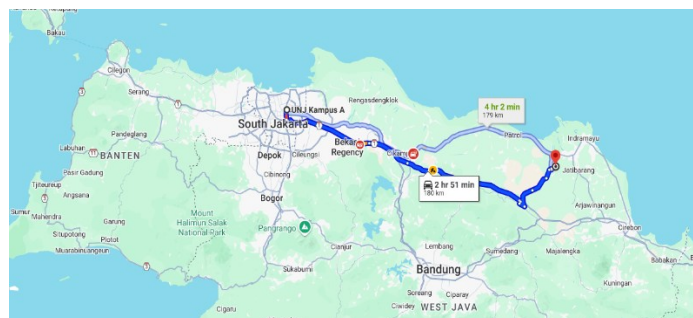


Figure 1. Location of Karangsong Village, Indramayu Regency, West Java Province

As detailed in the methods section, the training introduced the concept of conversational AI (ChatGPT), focusing on its function in generating marketing content. The session emphasized how MSMEs could use ChatGPT to create product descriptions, social media captions, and branding narratives through well-structured prompts. MSME participants learned to formulate clear and persuasive prompts, including identifying target audiences, selecting tone of voice, integrating product benefits, and embedding calls-to-action (CTA). Participants responded positively and showed high enthusiasm during interactive demonstrations. One culinary business owner, for example, generated three Instagram captions targeting youth audiences using casual, persuasive language demonstrating immediate practical application and learning transfer.



Figure 2. The Dissemination Session was Attended by MSME Actors

In addition to concept introduction, the session provided a framework for writing effective prompts, followed by real-time exercises. Participants applied the framework to their own products with direct facilitation and support. The value of prompt engineering was emphasized not only as a technical skill but as a strategy to overcome content creation barriers, especially for those without marketing teams. The success of the community service activity can be assessed through three key performance indicators. First, participant engagement during the session was targeted at a minimum of 80% active participation, and this target was exceeded with 87% of participants actively involved in discussions, asking questions, and participating in demonstrations. Second, the level of understanding of AI-powered branding was expected to reach at least 75% of participants demonstrating correct conceptual understanding; this was successfully achieved, with 82% of participants accurately explaining the concept of ChatGPT and its application in MSME promotion. Third, the ability to write functional and relevant prompts was targeted at a minimum of 70%, and the result showed that 76% of participants were able to create effective prompts incorporating elements such as audience targeting, tone of voice, product descriptions, and calls-to-action. These outcomes indicate that all targets were achieved or surpassed, affirming the effectiveness of the activity in meeting its intended learning and empowerment objectives.



Figure 3. The Dissemination Session of ChatGPT

The discussion further explored the practical use of ChatGPT in daily business operations, such as automating customer responses via chatbot integration, generating promotional campaigns, and responding to customer inquiries more efficiently. Feedback from the participants indicated that many were interested in exploring ChatGPT further, particularly to address their challenges in branding and customer communication. In summary, the dissemination activity successfully introduced AI-powered branding to the Karangsong MSME community. It also laid a strong foundation for future technical training and mentoring sessions that would deepen the participants' ability to integrate AI into their marketing workflows, thereby increasing their competitiveness in the digital economy.

This result aligns with existing research, such as Sharabati et al. (2024), which found that AI integration into marketing efforts can enhance promotion effectiveness by up to 40% (Sharabati et al. 2024). The introduction of ChatGPT in Karangsong echoes similar community service programs that promote digital tools for MSMEs but is distinguished by its practical focus on prompt development, which many previous programs have not emphasized in depth. The participants' enthusiasm and successful creation of AI-generated content in the session demonstrate that AI-based branding, when simplified and contextualized, is accessible even to MSMEs with limited digital literacy. This supports the broader goal of SDG 9 (Industry, Innovation, and Infrastructure) by empowering local businesses to adopt technological innovation.

This result also aligns with existing research, such as Juriah et al. (2024), which indicate that 72% of respondents have a basic understanding of AI. However, only 44% have implemented AI-based tools in their marketing strategies, and linear regression analysis revealed a significant relationship between the use of AI and increased sales, demonstrating that the use of AI positively contributes to marketing outcomes (Juriah & Susilastuty 2024). The result also aligns with research conducted by Firly (2024), that shows AI can optimize market segmentation, improve consumer needs prediction, and create more accurate marketing strategies. MSMEs integrating AI into their marketing strategies reportedly increase sales by up to 35%, expand market reach, and reduce marketing costs (Firly 2024).

Several challenges were encountered during implementation are internet connectivity was unstable in some training segments, affecting the real-time interaction with ChatGPT. This is consistent with challenges noted in rural ICT training programs (e.g., Kemenkominfo, 2022), where infrastructure remains a limiting factor. Moreover, varied levels of digital literacy, particularly among older MSME owners, necessitated adaptive teaching approaches, including slower-paced instruction and individualized assistance. This aligns with documented digital learning barriers in rural adult education contexts (Susanto & Hidayah, 2021). Rather than undermining the program,

these challenges reinforced the importance of facilitator flexibility and community-centered pedagogy in digital interventions.



Figure 5. The Dissemination Session of ChatGPT

This community service program contributes directly to SDG 9 (Industry, Innovation, and Infrastructure) by equipping rural MSMEs with technological capabilities to innovate. It also supports SDG 8 (Decent Work and Economic Growth) by enabling MSMEs to access broader markets through cost-efficient digital branding. The integration of MBKM student facilitators added value not only to community empowerment but also to student skill-building in real-world contexts. This model of combining AI tools, localized training, and student engagement represents a replicable best practice for other rural MSME clusters.

4. Conclusion

This community service activity successfully met its objectives by introducing and enhancing the understanding of AI-powered branding among MSMEs in Karangsong Village through the practical use of ChatGPT. As shown in the results, 87% of participants actively engaged in the session, 82% demonstrated a clear conceptual understanding of digital branding, and 76% were able to formulate effective prompts tailored for marketing purposes. These achievements highlight the effectiveness of an interactive, hands-on dissemination approach in fostering digital empowerment.

The findings affirm that, with appropriate guidance, MSMEs in rural areas can adopt artificial intelligence tools to enhance their marketing content and digital visibility. ChatGPT, in particular, proved to be a practical and accessible tool for generating compelling promotional materials, even for those with limited prior exposure to digital technologies. This initiative contributes to the advancement of Sustainable Development Goal 9 by promoting inclusive access to innovation and strengthening technological capacity at the grassroots level. Looking forward, the program offers strong potential for replication in other rural communities and sectors such as agriculture, fisheries, or crafts where AI-driven solutions could similarly support local economic development and digital transformation.

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