

Utilizing Artificial Intelligence (AI) Technology to support MSMEs businesses: ChatGPT

Pemanfaatan Teknologi Kecerdasan Buatan (AI) untuk mendukung usaha UMKM: ChatGPT

Dida Nurhaida*¹, Ellyana Amran², Erie Riza Nugraha³, Amirul Faiz Bin Osman⁴,
Aqilah Nazla Shafira⁵

^{1,2,3,5}Universitas Trisakti

⁴Universiti Utara Malaysia

^{1,2,3,5}Fakultas Ekonomi dan Bisnis, Universitas Trisakti

^{1,3}Pusat Kajian Kecerdasan Artifisial dan Teknologi Maju (Captivate), LPPM Universitas Trisakti

⁴Islamic Business School, Universiti Utara Malaysia

E-mail: dida.nurhaida@trisakti.ac.id¹, ellyana.amran@trisakti.ac.id²,

erie.nugraha@trisakti.ac.id³, amirulfaiz@uum.edu.my⁴

Abstract

In the digital age, MSMEs must continuously innovate and devise impactful marketing strategies to stay competitive in the midst of intense business competition. Embracing digital marketing is crucial, but it comes with challenges, particularly in creating compelling promotional texts. To address this, the author assisted "Kedai Uni Im", a MSMEs specializing in Minang Kabau delicacies, by utilizing ChatGPT for marketing content creation. Training and mentoring were provided as part of the science and technology diffusion method. The study's results indicate positive outcomes, including successful implementation of promotional text designs using ChatGPT, increased confidence in creating social media content, and more regular updates on social media platforms. Going forward, it is recommended to explore further benefits of ChatGPT for supporting MSMEs. Additionally, considering the significance and benefits of using ChatGPT for MSMEs, these materials can be replicated and shared broadly with other MSMEs players.

Keywords: Artificial Intelligence, ChatGPT, Digital marketing, Marketing content, MSMEs, Kedai Uni Im

Abstrak

Di era digital, UMKM harus terus berinovasi dan merancang strategi pemasaran yang efektif agar tetap kompetitif ditengah persaingan bisnis yang semakin ketat. Mengadopsi pemasaran digital sangat penting, namun memiliki tantangan, terutama dalam pembuatan teks promosi yang menarik. Untuk mengatasi hal ini, penulis membantu Uni Im, sebuah UMKM yang memproduksi masakan khas Minang Kabau, dengan memanfaatkan ChatGPT untuk merancang konten pemasaran. Pelatihan dan pendampingan diberikan sebagai bagian dari metode difusi ilmu pengetahuan dan teknologi. Hasil dari kegiatan menunjukkan dampak yang positif, diantaranya, mitra berhasil mengimplementasikan desain teks promosi dengan menggunakan ChatGPT, meningkatkan kepercayaan diri mitra dalam membuat konten media sosial, dan pembaruan yang lebih teratur pada platform media sosial. Untuk kegiatan berikutnya, disarankan agar mengeksplorasi manfaat lebih lanjut dari ChatGPT dalam mendukung aktivitas bisnis UMKM. Selain itu, mengingat penting dan besarnya manfaat penggunaan ChatGPT untuk UMKM, materi ini dapat direplikasi dan diberikan secara lebih luas kepada pelaku UMKM lainnya.

Kata kunci: Kecerdasan buatan, ChatGPT, Pemasaran digital, Teks promosi, UMKM, Kedai Uni Im

1. INTRODUCTION

In the age of digitalization, it is imperative for businesses, including Micro, Small, and Medium Enterprises (MSMEs), to continually innovate and devise impactful marketing strategies to sustain their competitive edge (Choudhury et al., 2022). The advent of digitalization has profoundly transformed consumer behavior, as highlighted by Korobov (2020). Presently, consumers are inclined towards seeking information, comparing products, and making online purchases (Sudirman et al., 2020). Online shopping offers significant advantages over traditional shopping methods, primarily due to its time-saving convenience and efficient search capabilities

for goods or services (Naz, 2019). This highlights the necessity for MSMEs to foster innovation, gain insights into evolving consumer behaviors, and attentively address their needs and desires. By doing so, MSMEs can maintain relevance in today's dynamic market landscape.

Digitalization also opens wider market access (Rosyady et al., 2022). In the current business landscape, MSMEs are encountering intensified competition, necessitating the development of effective marketing strategies. However it is crucial for MSMEs to capture consumers' attention amidst this heightened rivalry and enhance their competitive advantage.

Recognizing the significance of this phenomenon, the implementation of digital marketing strategies (Erick Karunia et al., 2021) and adaptations in promotional methods (Puspitasari et al., 2022) are very crucial for MSMEs to expand their reach and enhance business performance. Leveraging digital marketing enables MSMEs to directly engage with consumers, overcome communication barriers, monitor real-time consumer interactions, and tailor content to individual preferences (Normawati et al., 2021). Balan & Rege (2017) underscore the importance for MSMEs to embrace digital marketing's opportunities, convenience, and benefits through effective technology adoption. Correspondingly, several studies highlight a positive correlation between various forms of digitalization and the growth, performance, and competitiveness of small businesses in Indonesia (Daud et al., 2022; Pramuki & Kusumawati, 2021; Salindri et al., 2022; Zefriyenni et al., 2022).

According to a study conducted by Afifah et al. (2018), several key factors significantly influence the successful implementation of digital marketing. These factors include a comprehensive understanding of digital marketing strategies, proficiency in utilizing relevant tools and techniques, as well as staying updated on the latest trends and developments in the digital industry. However, the adoption of digital marketing strategies by MSMEs faces its own set of challenges, as highlighted by Gunarso et al. (2021) and Nurhaida et al. (2023).

An'ars et al. (2023), further explain that MSMEs confront difficulty in creating promotional texts that are interesting enough to capture consumers' attention in the midst of intense competition. The capacity to create engaging promotional texts necessitates the production of new and unique concepts. MSMEs frequently struggle to come up with new and creative ideas to express their promotional messages in a clear and concise manner allowing potential customers may easily understand. These difficulties can stem from a lack of understanding of marketing strategy as well as time and resource constraints.

MSMEs face difficulties in developing appealing and convincing promotional texts due to a lack of background or specialized education in marketing and communication. As a result, there is an urgent need for digital marketing training and support for MSMEs, as noted by Esya et al. (2021), with a specific focus on developing social media content, as emphasized by Nurhaida et al. (2022).

Furthermore, MSMEs frequently encounter limitations in terms of time and resources, impeding their ability to prioritize the development of effective promotional texts. Juggling various operational and managerial responsibilities within their day-to-day business, they find it challenging to allocate sufficient time for this task. Seeking assistance from external sources, such as marketing consultants or professional content writers, could potentially offer a solution. However, this option entails additional costs for the them.

On the other hand, the rapid development of computer-based information technology has resulted in many changes in human life, including Artificial Intelligence (AI) (Guntoro et al., 2015). One form of the AI that currently exists and can be utilized by MSMEs in designing marketing content is ChatGPT. ChatGPT, is a natural language processing (NLP) system developed by Open AI (Deng & Lin, 2022). ChatGPT was designed to answer questions, provide data and information, and produce relevant and consistent texts through an understanding of context and language structure gained from extensive text compilation training.

As a virtual assistant, ChatGPT is capable of providing assistance in many tasks, including but not limited to finding information, offering suggestions, explaining concepts, creating written content, and various other tasks that require understanding and generating text. According to a study conducted by Goh et al. (2020), ChatGPT can be utilized in marketing to increase efficiency and effectiveness in targeting customers properly. In addition, research conducted by Chen et al. (2021), show that the integration of AI in marketing content design can foster creativity and increase interaction between customers and brands. Therefore ChatGPT can be used by MSMEs in the process of designing marketing content so that the benefits of this AI technology need to be disseminated to MSMEs players through science and technology diffusion.

In light of the aforementioned challenges, the author aims to provide training and mentoring to the owner of “Kedai Uni Im”, MSMEs members of the Jakpreneur community. “Kedai Uni Im”, is a home-based business specializing in Minang Kabau delicacies such as rendang, dendeng batokok, dendeng balado, and mustafa potato chips as presented in Figure 1. The products have obtained Halal certification from the Indonesian Ulama Council (MUI) and the certification for Household Food Industry or known as P-IRT, which is a certification for home-based food and beverage producers. The owners also have developed product improvements such as vacuum packaging, which ensures freshness and durability. These packed products make excellent souvenirs for both domestic and international travelers. Furthermore, the vacuum packaging adds a modern touch to the product presentation.



Figure 1. Products representation of “Kedai Uni Im”

Despite these encouraging improvements, the full implementation of digital marketing strategies has been hampered by a variety of obstacles. These include time constraints, a lack of budget for hiring social media administrators, and challenges in coming up with ideas for social media content, particularly in generating persuasive promotional texts.

The objective of this training and mentoring program extends beyond imparting a comprehensive understanding of ChatGPT technology. Its primary aim is to empower partner by enabling them to master the effective utilization of this technology. By fostering a deep understanding of ChatGPT, the goal is to equip partners with the knowledge and skills necessary to fully leverage its potential benefits within their specific business contexts.

2. METHOD

The implementation of this activity follows the principle of the diffusion of Science and Technology, which refers to the process of disseminating science and technology to the broader community (Vajjala et al., 2022). Science and technology diffusion can be done through training, education, promotion, inter-agency collaboration, and supporting policies. The aim is to accelerate the adoption and use of science and technology by the community, in order to significantly improve quality of life, efficiency and productivity. In this activity, science and technology diffusion is implemented through individual assistance and support in understanding and utilizing ChatGPT, which is relevant to MSME business development. This activity is part of our efforts to increase the understanding and utilization of modern technology to support the growth of MSMEs.

The activity takes place for 1 (one) month, in June 2023, with weekly meetings. The implementation method used is structured learning, which involves several stages, starting with identifying partner needs, preparing materials, implementation of training and mentoring activities, and concluding with monitoring and evaluation. Figure 2. depicts the overall flow of the activities.

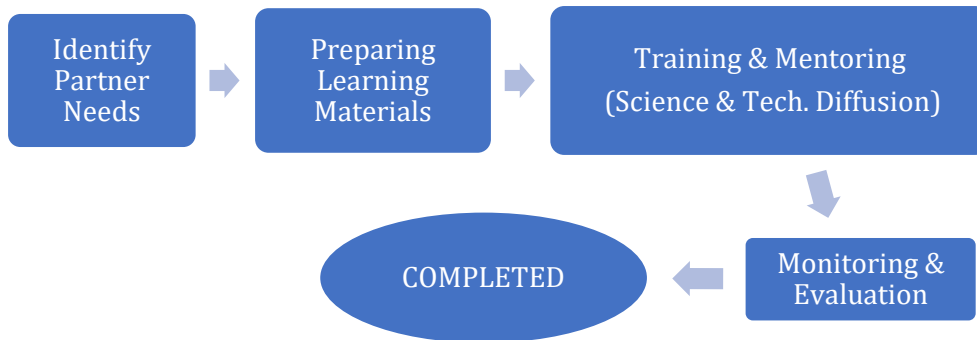


Figure 2. Flow of Stages in Community Service Program

3. RESULTS AND DISCUSSION

3.1 Training and mentoring Activities

In this community service activity, authors directly involved in providing training and mentoring in utilizing ChatGPT. The material provided consists of three major topics including: 1) Introduction to the concept of ChatGPT, 2) Explanation of the potential benefits that ChatGPT offers to MSMEs, and 3) Demonstration of the practical usage of ChatGPT in creating digital marketing content. The following are some elaborations on the topics.

Introduction to the concept of ChatGPT

The session begins with brief overview to the concept of technology based on Artificial Intelligence, ChatGPT. The trainer explained that ChatGPT or Generative Pre-training Transformer is a form of artificial intelligence language model that generates human-like responses to text-based questions using deep learning methodologies provided by Open AI. The key concept of ChatGPT is its ability to understand and generate text that is more natural and coherent in response to user input.

Furthermore, the trainer explain that ChatGPT operates under conversation mode for communication. Users can interact with ChatGPT via the website at <https://play.openai.com/> by asking a question and receiving an instant response. This functionality is also known as a chatbot powered by Open AI. In conclusion trainer emphasized that with its ability to generate human-like written material and answer to more complex questions, ChatGPT open the door to MSMEs to effectively utilize this technology to support their business activities.



Figure 3. Overview to the Concept of ChatGPT and Its Benefit for MSMEs

Explanation of the potential benefits that ChatGPT offers to MSMEs

The trainer went on to explained there are several reasons why MSMEs need to utilize ChatGPT to support their business, including: first, to improve customers engagement (Biswas, 2023). ChatGPT allows MSMEs to expand their direct interactions with customers. By using GPT-based chatbots, MSMEs can provide fast and relevant responses to customer inquiries, requests or concerns, ultimately resulting in increased customer engagement and satisfaction.

The second benefit is enhancing operational efficiency (Selamat & Windasari, 2021). ChatGPT can be integrated into communication and service systems. Because of this integration it can provide automatic responses to frequently asked questions, shorten response times, and minimize the strain for customer service representatives. Such automation can greatly reduce manual workload, allowing businesses to concentrate more on their core activities.

Third, it has the potential to save personnel costs (Cordero et al., 2022). By utilizing ChatGPT as a virtual assistant, so that MSMEs do not need to recruit and train additional employees. GPT-based chatbots can effectively take over certain customer support functions, providing 24/7 service at no additional cost.

Personalization and product recommendations are the fourth advantage (Muna et al., 2023). ChatGPT can provide more relevant product suggestions and customized customer experiences by analyzing client data. This functionality eventually leads to better sales conversions and customer satisfaction.

The fifth point is enhanced scalability (Al-sa & Miller, 2023). ChatGPT enables MSMEs to manage the increasing volume of client interaction without having to invest heavily on staff employees. This allows MSMEs to grow their businesses without having to worry about insufficient customer service.

Finally, the trainer explained how the usage of this technology can increase image and trust by making clients feel inventive and modern. MSMEs may develop a strong image and enhance consumer trust by delivering prompt responses and accurate information, as well as a positive customer experience (Shaji George et al., 2023).

In conclusion, the trainer noted that by adopting ChatGPT, MSMEs can profit in terms of boosting customer interaction, operational efficiency, cost savings, product personalization, scalability, and increasing image and trust. Adopting technology such as ChatGPT is critical for MSMEs to remain competitive and build their businesses in the current digital ages.

Demonstration of the Practical Use of ChatGPT in Creating Marketing Content

As the last material, the trainer specifically demonstrated how to utilize ChatGPT to create marketing content. First, to dig up the idea. ChatGPT can be used to explore creative ideas in creating marketing content. The trainer demonstrates by asking questions about the topic to be raised and the ChatGPT provide suggestions and new ideas that can enrich the marketing content strategy.

Second, the trainer demonstrates how to ask ChatGPT for help writing promotional text or special offers. Here, we need to provide information about what kind of product or offer to promote, and the ChatGPT will help compose interesting and persuasive sentences to be used as promotional text.

Third, the trainer provides an example of how to edit messages with the help of this AI technology. As is known, every consumer has different needs or preferences. ChatGPT can be used to help in customize marketing messages according to customer profiles. We need to provide information about the target consumer, and ChatGPT will advise on the most effective words or approaches to be used in marketing messages.

Fourth, demonstration in creating social media content. ChatGPT can help MSMEs in creating interesting content for social media posts. We can discuss with this system about the content ideas, titles, descriptions or captions to use in social media posts. ChatGPT can also assist in finding relevant images or graphics to complement the content.

Fifth, the trainer shows how ChatGPT can help in correcting grammar. Before publishing marketing content, user can ask ChatGPT to help in checking grammar errors and providing suggestions for improvement. In this point ChatGPT can serve as a quick editing tool to ensure marketing content looks professional without any mistakes.

Furthermore, we can also ask ChatGPT for help to answer the follower questions. When social media followers ask questions or leave comments, ChatGPT can help respond to questions or comments from followers. We can enter questions or responses from followers into the system, and an appropriate answer will be given.

Finally, the trainer gives an example of how to do topic research. If MSMEs need to conduct research on a particular topic for social media content, ChatGPT can assist in finding relevant information. User can ask questions about topics of interest, and the ChatGPT will provide a summary or important points that can be used in compiling marketing content.

After demonstrating how to utilize ChatGPT for marketing content creation. Trainers ask partner to try to do it themselves while accompanying and giving directions when partners need help (Figure 4). This to ensure that partners fully understand and can do it independently.

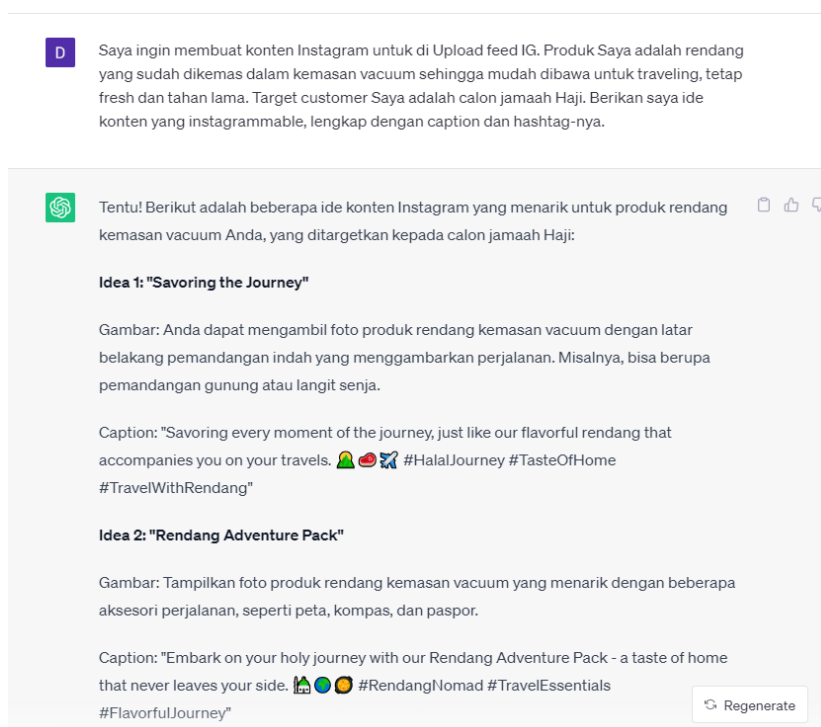


Figure 4. See how ChatGPT makes marketing content

In closing, the trainer also underlined that ChatGPT is a language model that in general can provide advice and assistance, but the results still need to be confirmed and edited by humans before being used. ChatGPT can be a useful tool in supporting MSMEs in creating marketing content, however it is still important to consider human creativity and the specific needs of the business itself.

3.2 Monitoring and Evaluation

The monitoring and evaluation of activities involve establishing communication with business owner. As part of this process, a questionnaire was utilized to assess whether there was an improvement in partners' comprehension of GPT Chat's functionality and its application in designing diverse promotional materials for their products. The findings of the study indicate a noticeable increase in understanding, as presented in Table 1.

Table 1. Evaluation Result of the Mentoring Activity

No.	Indicators		Pre Mentoring	Post Mentoring
1	Understanding the Concept of ChatGPT	Not Understanding	100%	0%
		Sufficient Understanding	0%	0%
		Understanding	0%	10%
		Very Understanding	0%	90%
2	The Ability to Ask Effective Questions	Not Understanding	100%	0%
		Sufficient Understanding	0%	0%
		Understanding	0%	20%
		Very Understanding	0%	80%
3	Understanding ChatGPT Responses	Not Understanding	100%	0%
		Sufficient Understanding	0%	0%
		Understanding	0%	20%
		Very Understanding	0%	80%
4	Creativity in the Use of ChatGPT	Not Understanding	100%	0%
		Sufficient Understanding	0%	0%
		Understanding	0%	30%
		Very Understanding	0%	70%
5	Understanding of Ethics and Privacy	Not Understanding	100%	0%
		Sufficient Understanding	0%	0%
		Understanding	0%	10%
		Very Understanding	0%	90%

Source: Interview and Observation Results

4. CONCLUSION

The results of this study suggest that the training activities conducted have produced positive outcomes, and the following conclusions can be drawn:

1. The design of promotional texts using ChatGPT has been successfully implemented and applied by the partner;
2. Partner more confidence in creating social media content and other promotional materials;
3. Partner have started to actively update their social media platforms regularly and in a more scheduled manner than before.

Activities can be continued by further exploring the other benefits of ChatGPT in supporting MSMEs businesses. Given the importance and great benefits of using this technology in supporting MSMEs businesses, this material can be replicated and disseminated to other MSME players.

ACKNOWLEDGEMENT

The PkM team would like to extend its gratitude to LPPM Universitas Trisakti, the leaders and DRPMF of the Faculty of Economic and Business - Universitas Trisakti, for their invaluable support in facilitating the successful implementation of this training program. The PkM team would also like to express sincere appreciation to “Kedai Uni Im”, a valuable collaborator, and all other relevant parties who have made substantial contributions to the successful execution of this community service initiative.

REFERENCES

- Afifah, A. N., Mukhamad Najib, M., Ma'mun, S., & Leong, Y. E. (2018). Digital Marketing Adoption and The Influences Towards Business Successes of MSMEs Creative Sector In Indonesia and Malaysia. *Journal of Applied Management (JAM)*, 16(3), 377-386. <https://doi.org/10.21776/UB.JAM.2018.016.03.01>
- Al-sa, A., & Miller, D. (2023). Exploring the Impact of Artificial Intelligence language model ChatGPT on the User Experience. *International Journal on Technology, Innovation, and Management (IJTIM)*, 3(1), 1-8. <https://doi.org/10.54489/ijtim.v3i1.195>
- An'ars, M. G., Hendrastuty, N., & Putra, D. (2023). Perancangan Teks Promosi UMKM Sikop Arrum Batik Menggunakan Program Berbasis AI ChatGPT. *Jurnal Pengabdian Kepada Masyarakat TABIKPUN*, 4(1), 11-18. <https://doi.org/10.23960/jpkmt.v4i1.109>
- Balan, S & Rege, J. (2017). Mining for social media: Usage patterns of small businesses. *Business Systems Research*, 8(1), 43-50. <https://doi.org/10.1515/bsrj-2017-0004>
- Biswas, S. (2023). *The Function of chat GPT in Social Media: According to chat GPT*. <https://doi.org/10.2139/ssrn.4405389>
- Chen, Y., Wu, C. H., & Lin, S. S. (2021). AI-generated ad creativity and consumer response: The moderating roles of brand familiarity and ad prominence. *Journal of Interactive Marketing*, 54, 101-113. <https://doi.org/10.1016/j.intmar.2020.11.002>
- Choudhury, A., Singh, A., & Dwivedi, Y. .; (2022). E-commerce adoption in emerging economies: a systematic review and research agenda. *Journal of Business Research*, 142, 428-441. <https://doi.org/10.1016/j.jbusres.2021.11.010>
- Cordero, J., Barba-Guaman, L., & Guamán, F. (2022). Use of chatbots for customer service in MSMEs. *Applied Computing and Informatics*. <https://doi.org/10.1108/ACI-06-2022-0148>
- Daud, I., Nurjannah, D., Mohyi, A., Ambarwati, T., & Cahyono, Y. (2022). The effect of digital marketing, digital finance and digital payment on finance performance of Indonesian SMEs. *International Journal of Data and Network Science*, 6, 37-44. <https://doi.org/10.5267/j.ijdns.2021.10.006>
- Deng, J., & Lin, Y. (2022). The Benefits and Challenges of ChatGPT: An Overview. *Frontiers in Computing and Intelligent Systems*, 2(2), 81-83. <https://www.urbangateway.org/news/benefits-and-challenges-urbanization>
- Erick Karunia, Ahmad Juliana, Syhran, Ahmatang, Nurul Hidayat, Budi Hasyim, Muh. Irfandy Azis, & Shalahuddin. (2021). Digital Marketing Training for UMKM of Tarakan City. *International Journal Of Community Service*, 1(2), 189-200. <https://doi.org/10.51601/ijcs.v1i2.3>
- Esya, L., Nurhaida, D., Putri, B. Y., & Adinda, N. (2021). Penanggulangan Dampak Covid-19 Melalui Pendampingan Wirausaha Rumah Tangga dan Penjualan Online Produk “Kripik Kentang.” *Jurnal AKAL : Abdimas Dan Kearifan Lokal*, 2(2), 76-82. <https://doi.org/10.25105/akal.v2i2.10268>
- Goh, K. Y., Heng, C. S., Lin, Z., & Chua, Y. H. (2020). Effects of artificial intelligence (AI) on customer behavior: A review and agenda for future research. *Journal of Business Research*, 116, 583-600. <https://doi.org/10.1016/j.jbusres.2020.05.025>
- Gunarso, D., Natanael, F., Limmanuel, F., Enrico, I. J., Ginting, M. L., Valentino, T., & Maliki, L. (2021). Digital Marketing Calendar Untuk Bisnis Kuliner: Pendampingan Sosial Media Instagram @Inidapurmakwaw Untuk Keberlangsungan Di Era New Normal. *Jurnal Abdi Masyarakat Indonesia (JAMIN)*, 3(2), 121-135. <https://doi.org/10.25105/jamin.v3i2.10424>

- Guntoro, G., Costaner, L., & Lisnawita, L. (2015). Aplikasi Chatbot untuk Layanan Informasi dan Akademik Kampus Berbasis Artificial Intelligence Markup Language (AIML). *Digital Zone: Jurnal Teknologi Informasi Dan Komunikasi*, 11(2), 291–300. <https://doi.org/10.31849/digitalzone.v11i2.5049>
- Korobov, Y. (2020). Impact of digitalization on consumer behaviour and marketing activity in financial markets. *SHS Web of Conferences (Vol. 73)*, 01013. <https://doi.org/10.1051/shsconf/20207301013>
- Muna, A., Ausat, A., Azzaakiyyah, H. K., Subang, U., Studi, P., Perpustakaan, I., Hukum, F., Studi, P., Publik, A., & Ilmu, F. (2023). The Role of ChatGPT in Enabling MSMEs to Compete in the Digital Age. *INNOVATIVE: Journal Of Social Science Research*, 3, 622–631. <https://doi.org/10.31004/innovative.v3i2.346>
- Naz, T. (2019). Online Shopping Behaviour Technology Advancement: A Great Change in Consumer Behaviour. *Proceedings of 10th International Conference on Digital Strategies for Organizational Success*. <https://doi.org/10.2139/ssrn.3333079>
- Normawati, R. A., Wardani, S. I., Widayani, A., Komunitas, A., Putra, N., & Fajar, S. (2021). Pemanfaatan Digital Marketing sebagai Sarana Komersialisasi Produk Kampung Batik Kembang Turi Blitar. *DINAMISIA: Jurnal Pengabdian Kepada Masyarakat*, 5(1), 253–261. <https://doi.org/10.31849/dinamisia.v5i2.4157>
- Nurhaida, D., Busnetty, I., Rustam, R., Nurhasna, F. A., & Prasetya, A. (2023). Social media content optimization assistance for the community of Tanah Abang Traders Association 'HIPTA.' *Community Empowerment*, 8(2), 148–154. <https://doi.org/10.31603/ce.8608>
- Nurhaida, D., Dizar, S., Alisa, I. A., Kartini, A., Suteja, S. M., & Hasna, T. D. (2022). Pendampingan Digital Marketing: Tips Berjualan Dan Beriklan Melalui Instaads. *JUARA: Jurnal Wahana Abdimas Sejahtera*, 1–10. <https://doi.org/10.25105/juara.v3i2.12929>
- Pramuki, NMWA & Kusumawati, N. (2021). The Influence of Product Innovation, Digital Marketing and Competitive Advantage in Improving the Marketing Performance of Small and Medium Industries in Bali. *Advances in Economics, Business and Management Research*, 175, 248–254. <https://doi.org/10.2991/AEBMR.K.210510.040>
- Puspitasari, P., Nilasari, B. M., Kristaung, R., & Baliartati, B. O. (2022). Penyuluhan Peningkatan Kinerja UMKM di Masa Pandemi Covid-19. *JUARA : Jurnal Wahana Abdimas Sejahtera*, 3, 209–217. <https://doi.org/10.25105/juara.v3i2.13394>
- Rosyady, A. F., Hamdi, F. L., Rizky, R. A., Gendis, K., Harli, P., Andra, M., & Ramadhan, K. (2022). Digitalisasi UMKM Untuk Meningkatkan Nilai Ekonomis dan Inovasi pada Industri Kreatif. *Journal of Electrical Engineering and Computer (JEECOM)*, 4(1), 18–23. <https://doi.org/10.33650/jeeecom.v4i1.3660>
- Salindri, Y. A., Sulisty, A., Annisa, R., Hadianto, F., & Arifkusuma, M. (2022). Pemberdayaan UKM Blangkon Yogyakarta Melalui Pemasaran Berbasis Digital Sebagai Upaya Menembus Pasar Global. *Jurnal Inovasi Dan Pengabdian Masyarakat Indonesia (JIPMI)*, 1(4), 41–46. <https://doi.org/10.26714/jipmi.v1i4.62>
- Selamat, M. A., & Windasari, N. A. (2021). Chatbot for SMEs: Integrating customer and business owner perspectives. *Technology in Society*, 66(January), 101685. <https://doi.org/10.1016/j.techsoc.2021.101685>
- Shaji George, A., Hovan George, A., & Martin, Asg. (2023). A Review of ChatGPT AI's Impact on Several Business Sectors. *Partners Universal International Innovation Journal (PUIJ)*, February, 9–23. <https://doi.org/10.5281/zenodo.7644359>
- Sudirman, A., Alaydrus, S., Rosmayati, S., Syamsuriansyah, S., Nugroho, L., Arifudin, O., Hanika, I. M., Haerany, A., Rusmana, F. D., & Rijal, K. (2020). *Perilaku Konsumen Dan Perkembangannya Di Era Digital*. Widina Bhakti Persada.
- Vajjala, H., Mehta, V., & Oza, N. (2022). Analyzing the diffusion of artificial intelligence across industries: A social network analysis approach. *Journal of Business Research*, 144, 79–90. <https://doi.org/10.1016/j.jbusres.2021.09>
- Zefriyenni, Z., Eliza, E., Azka, B. P., & Lusiana, L. (2022). Pengembangan UMKM Berbasis Digital Pada UMKM Batu Gadang Kecamatan Lubuk Kilangan Padang. *Kumawula : Jurnal Pengabdian Kepada Masyarakat*, 5(3), 558–564. <https://doi.org/10.24198/kumawula.v5i3.41446>