



# The Experience of Artificial Intelligence in Architectural Space Production within the Scope of Creating "Brand Identity" for a Local Brand

Muhlis Arda Ekici<sup>1,\*</sup>, Tuğçe Çelik<sup>2</sup>

<sup>1</sup> Department of Architecture, Graduate School of Natural and Applied Sciences, Ostim Technical University, Ankara, Turkey

<sup>2</sup> Department of Interior Architecture and Environmental Design, Faculty of Architecture and Design, Ostim Technical University, Ankara, Turkey

## ARTICLE INFO

## ABSTRACT

### Article history:

Received 28 January 2025

Received in revised form 24 March 2025

Accepted 28 March 2025

Available online 30 March 2025

### Keywords:

Brand Identity; Store Design, Artificial Intelligence; Text-to-Image Generation; Architectural Design

Branding and brand identity emerged from the desire to stand out in line with consumption needs. Branding and corporate identity design are processes that must be carried out simultaneously. In this context, the design of the brand's structure, interior spaces, and stores intersects with the discipline of architecture in the creation of a "brand identity." Spatial design, through the use of architectural elements and spatial configurations, differentiates the brand and aims to capture customer attention. Today, the role of artificial intelligence (AI) in the design process is being questioned. Text-to-image AI algorithms redefine architectural formation by generating unique and diverse design outputs. In this context, the question, "Can artificial intelligence produce architectural spaces for brand identity?" forms the basis of this research. The study aims to use text-to-image technology to rapidly generate diverse design alternatives for a local brand. The relationship between text-to-image technology and decision-making is shaped by its ability to guide and optimize users' creative processes. This technology allows users to provide text-based inputs to generate visual outputs, playing a critical role in visualizing both design options and possibilities in the decision-making process. By examining the contributions of the generated visuals to brand identity and architectural design, this method is proposed as a new approach to architectural design. While designers assume the role of decision-makers in this process, AI emerges as a significant design parameter.

## 1. Introduction

Artificial intelligence (AI) technology today possesses the potential to revolutionize numerous aspects of human life. Design and architecture are among the fields where AI's innovative approaches have proven to be particularly impactful. By emulating human intelligence in tasks such as object recognition, problem-solving, creative idea generation, and decision-making, AI enables these processes to become faster, more autonomous, and multifaceted. In architectural design, leveraging

\* Corresponding author.

E-mail address: [ardaa.ecc@gmail.com](mailto:ardaa.ecc@gmail.com)

<https://doi.org/10.59543/jidmis.v2i.13491>

AI's creative capabilities offers a novel method for creating unique and effective spaces, particularly in the design of physical environments that reflect and reinforce brand identities.

In the branding process, physical spaces are among the most critical elements through which brand identity is conveyed to the target audience. The textures, colors, and forms utilized in the design of these spaces serve as an interface that directly communicates the brand's message and values to consumers. The design and management process in branding must be accurately reflected in and aligned with the physical environment [1]. Organizations must seize every opportunity to ensure that the physical environment aligns with the brand to meet customer expectations and effectively manage spatial experiences [2]. In this context, during the brand creation or renewal process, decisions related to spatial design should be developed in conjunction with identity strategies to create a cohesive vision. However, traditional design processes often come with disadvantages, such as being time-intensive and offering limited options. At this point, AI emerges as a powerful tool for accelerating design processes and providing unique and diverse alternatives.

This study aims to examine the role of AI in architectural design processes and its contributions within the context of branding. In traditional branding processes, the design of physical spaces plays a crucial role as an integral component of brand identity. However, these processes are time-consuming and typically offer a limited range of design alternatives. AI-powered text-to-image technologies have the potential to accelerate design processes and generate a diverse array of alternatives that align with brand identity. In this study, the spatial design of a local brand was conducted using Copilot AI. The role of AI in branding processes and its comparison with traditional methods have not been sufficiently addressed in the literature. This study aims to bridge this gap by investigating the contributions of AI-assisted spatial design to branding.

Through the case study of a local brand, the potential of AI algorithms to create spaces that reflect the brand's identity is explored. The research investigates how AI's provision of multiple design alternatives and its integration into design processes transform the designer's decision-making mechanisms and the advantages this transformation offers to brands. While the existing literature primarily addresses the impact of AI on design from a technical perspective, its relationship with branding, corporate identity, and spatial design has been less thoroughly examined. This study seeks to provide a guide for leveraging AI's learning and comprehension capabilities to effectively translate brand identity strategies into spatial designs.

Furthermore, examining the innovations introduced by artificial intelligence (AI) in design processes will provide valuable insights for future applications. Spatial design holds critical importance for enabling local brands to compete on national and international platforms. In this context, the following research question emerges: "What innovative methods and strategies can AI technology offer for reflecting a brand's identity and values in spatial design?" Additionally, the central question of this study can be articulated as follows: "What advantages does AI offer to designers and brand owners when integrating a brand's identity into spatial design, and how do these advantages influence the brand's positioning in the market?"

Within the framework of this question, the hypotheses that can be developed are as follows:

- i. Artificial intelligence (AI) reduces the workload of designers, saving time while enriching the design process through its ability to generate multiple alternatives.
- ii. AI-assisted designs enhance consumer experiences and increase brand value by creating spaces that align with brand identity.
- iii. Local brands can design more competitive and visually striking spaces for international markets with the support of AI.

In this study, the local Turkish brand, “Martı”, was selected as the sample. Martı is an electric scooter and shared mobility platform operating in Turkey. The company provides a practical and environmentally friendly alternative for urban transportation, offering fast and cost-effective travel solutions, particularly in densely populated cities. Through its mobile application, Martı allows users to rent scooters for short-distance travel. By catering to both individual users and supporting public transportation, Martı represents an innovative service in urban mobility [3]. Due to the company’s innovative and sustainable policies, Martı was chosen as the field study focus for this research involving AI-driven design production. The AI interface employed in this study is Copilot AI, an algorithm that utilizes text-to-image generation technology. Within this context, the brand identity of the selected local brand was described using key terms, and architectural spaces reflecting the brand’s identity were designed.

### *1.1 Architectural Design and Brand Identity*

A brand is defined as a name, term, symbol, or combination of designs used to identify the goods and services offered by a seller or group of sellers and to distinguish them from competitors [4]. According to Don Schultz, a brand is a summary of who created it, what they aim to achieve, and how they intend to do so [5]. In essence, a brand represents the past and future of a product, giving it meaning and direction while serving as an agreement between the consumer and the company over time [6]. Brand identity, on the other hand, is a concept that defines the direction, purpose, and meaning of the brand. It lies at the heart of a brand's strategic vision [7]. Branding strategies play a critical role in determining and maintaining an institution's position within its sectoral environment. Additionally, "space," which serves as an interface where the institution interacts with its users, emerges as one of the most effective and significant elements for conveying corporate identity and branding decisions to the target audience. In this context, during the process of brand creation and/or renewal, decisions related to space design should be developed in alignment with identity strategies to form a holistic framework. Identity, brand positioning, the defined target audience, and spatial design should be addressed as a unified whole, and the processes should be managed accordingly. Alina Wheeler, in her book *Designing Brand Identity* (2006), outlines 13 fundamental steps as the essential requirements for branded spaces. These steps provide a structured framework for aligning brand identity with spatial design to ensure consistency and effectiveness in branding [2]:

- i. Identifying the needs, preferences, habits, and desires of the target audience.
- ii. Creating a unique experience aligned with the brand’s positioning.
- iii. Understanding competitors, learning from both successes and failures.
- iv. Designing an environment that encourages a comfortable and inviting experience, fostering repeat visits.
- v. Providing opportunities to deliver high-quality and efficient service during the environment's usage.
- vi. Developing spaces that promote sales and facilitate seamless transaction processes.
- vii. Considering spatial criteria such as visual, auditory, olfactory, tactile, and thermal factors.
- viii. Understanding the psychological effects of light and lighting sources, while prioritizing energy efficiency.
- ix. Addressing operational needs to fulfill the brand’s promises effectively.
- x. Analyzing traffic flow, workload, and economic factors comprehensively.
- xi. Creating spaces that harmonize with commercial strategies, including display units, advertising, and sales initiatives.

- xii. Designing sustainable, durable spaces that are easy to maintain and clean.
- xiii. Ensuring accessibility for customers with disabilities through inclusive design. [2]

In the branding process, the concept of design serves to translate the strategies of an institution or organization into a visual language [8]. Spatial design, with its identifiable features, functions not only as an interface between the institution and the user but also as a tool for positioning the institution in the market and distinguishing it from competitors [9]. In today's world, branding encompasses far more than just the design of a name or logo. Brand spaces have become tools that reflect the brand's identity while enhancing customer interaction. Corporate identity design is not merely the combination of visual elements but is closely linked to the architectural elements involved in the design of the space. In this process, the effective use of architectural discipline enables brands to acquire a unique identity and establish a deep connection with their users [10]. The production and consumption of space has become a significant part of modern marketing strategies, facilitating the creation of a strong brand identity [11].

### *1.2 Architectural Design, Artificial Intelligence, and Decision-Making*

Architectural design is an inherently complex process that requires the integration of various parameters, such as aesthetics, functionality, and user experience. With the advent of artificial intelligence (AI), this process is increasingly shaped by AI-driven tools that provide more efficient and informative design solutions in decision-making processes.

One of the subfields of artificial intelligence, "text-to-image" technology, has shown remarkable development in recent years, establishing a new paradigm in the field of visual production. This technology focuses on the development of systems capable of extracting meaning from written text and expressing these texts in a visual form. The history of text-to-image technology is closely related to the evolution of artificial intelligence and deep learning methods.

The initial steps of text-to-image technology were quite limited, as computers required a fundamental infrastructure to understand text and generate visual representations. This process gained momentum in 2014 with the development of Generative Adversarial Networks (GANs) by Ian Goodfellow and his team. GANs enabled the generation of realistic images by creating a competitive environment between two artificial neural networks: the generator and the discriminator. The success of GANs laid the foundation for advancements in the text-to-image domain [12].

Between 2015 and 2016, the first concrete steps were taken in the field of text-to-image translation. Notably, the work of Reed and colleagues pioneered the development of models that could take text descriptions and generate images corresponding to those descriptions. These models utilized natural language processing (NLP) techniques to interpret the meaning of the text and leveraged the GANs framework to visualize that meaning. However, the images produced during this period had limited resolution and quality, often only capable of expressing basic shapes or colors [13].

Today, text-to-image technology has become a creative tool for designers, artists, and businesses. Numerous innovative applications have been developed for its use in fields such as architecture, game design, advertising, fashion, and education. For instance, text-to-image models are used in architectural design processes to quickly generate draft visuals of a project, create architectural plan prototypes, and serve as sources of inspiration during the design phase [14-15-16]. In this context, artificial intelligence goes beyond being merely an assistant in the creative process, becoming a parameter within the design process itself [17]. This shift is transforming architects' traditional design approaches, offering them more autonomous, original, and highly alternative solutions.

Consequently, the role of the architect in the decision-making process is being redefined. Here, decision-making refers to the choices architects make regarding the form, function, and materials of a design.

The relationship between text-to-image technology and the decision-making process is shaped by its ability to guide and optimize users' creative processes. This technology enables designers/architects to obtain visual outputs by providing text-based inputs, and these outputs play a critical role in visualizing design options and possibilities during the decision-making process. When making decisions towards specific goals, designers/architects generate visuals that align with their needs and descriptions through text commands, allowing them to make more informed choices among alternatives. Additionally, with text-to-image technology, visual outputs can be produced iteratively, enabling the architect to evaluate the outputs and adjust their inputs accordingly, thus creating a continuous feedback loop. Compared to traditional design processes, this technology accelerates the decision-making process by delivering faster results and offering the opportunity to evaluate more options in a shorter period. Furthermore, text-to-image tools have the potential to present innovative visuals that designers might not have anticipated. In this context, it expands creative possibilities. In architectural design, AI not only enhances decision-making but also transforms the role of the architect, providing them with powerful tools that facilitate creativity and innovation while ensuring precision and efficiency in design choices.

## **2. Methodology**

In this research, the importance of architectural space in the formation of the brand identity of a local brand will be emphasized. The study will address questions such as "Can text-to-image technology contribute to the design stages?", "Can original results be obtained?", and "Can it be used as a resource to help local brands globalize?" regarding the artificial intelligence technologies planned for use in the design stages of architectural space. In this context, while artificial intelligence technology is utilized in the branding process, a new method for architecture will be proposed.

The methodology of the study is structured as follows:

- i. A literature review was conducted on brand, brand identity, architectural space-branding relationship, artificial intelligence, and architecture.
- ii. Before starting architectural space production experiments with the selected interface (Copilot AI), a pilot training session was held to test the algorithm.
- iii. A local brand was chosen as the sample space for the research. "Marti" was selected as the local brand.
- iv. Different alternative architectural space visuals were generated using the Copilot AI tool. Successful/unsuccessful productions were evaluated, and the outputs were discussed in terms of brand identity, architectural design, and space.

### **2.1 Case Study**

One of the key advantages of using artificial intelligence (AI) in space design for a brand, compared to traditional design methods, is the rapid generation of multiple alternatives and the quick evaluation of these alternatives by the designer. This enables brands to build their identities in a more dynamic way [18]. Additionally, the changing role of AI in the process helps designers develop strategies that strengthen the brand identity not only through the physical dimensions of the space but also within digital and virtual environments. For instance, the integration of augmented reality

(AR) or virtual reality (VR) technologies contributes to the creation of a more effective brand identity by reflecting the space digitally [19]. In this context, AI algorithms redefine the boundaries of brands by addressing both digital and physical space design.

In this study, architectural designs for a local brand have been experimented with using text-to-image technology. With the rapid rise of local brands and their subsequent need for promotion, the requirement for spaces that reflect the qualities of the brand name has emerged, both locally and internationally. It becomes possible to enhance the brand's value by reflecting elements such as texture, color, and shape that evoke the brand name in the existing space. Thanks to AI's learning and comprehension capabilities, desired details, textures, and important aspects like the existing space's boundaries can be taught, enabling the design process to be created rapidly and with multiple alternatives [15-16].

For the selected local brand "Marti," key terms were first extracted (Figure 1). These keywords were chosen in the context of the brand's defined identity and policies.

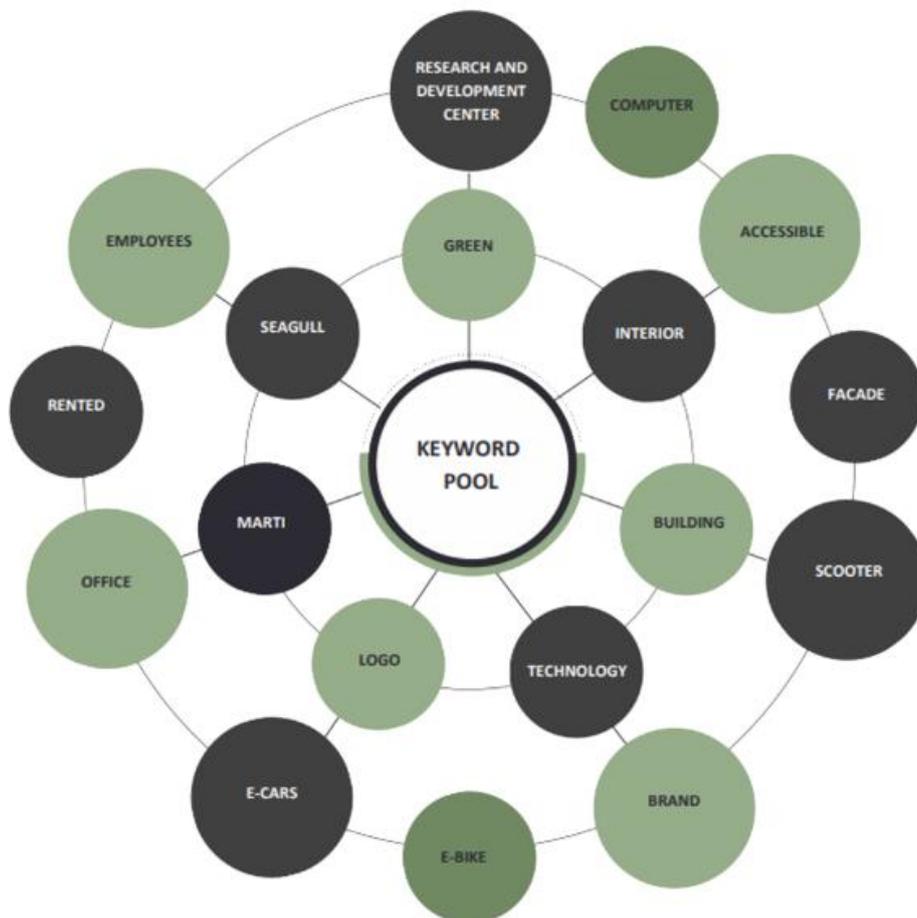


Fig. 1. "Marti," key terms

### 3. Results

In the study, text-to-image generation was carried out using the extracted keywords. The written prompts and the resulting visuals are shown in the Table 1.

**Table 1**  
 The resulting visuals

Prompt	Recognition of the Brand by AI	Generated Visual
<i>Seagull rented scooter</i>	✘	
<i>The building where scooters of the “Seagull” brand are rented. The logo of this building is a seagull</i>	✘	
<i>Building where scooters, electric bicycles and electric cars of the “Seagull” brand are rented. The logo of this brand is a seagull</i>	✘	
<i>Green building where scooters, electric bicycles and small electric cars of the “Marti” brand are rented. The logo of this brand is a technological seagull</i>	✘	
<i>Green technological building where scooters, electric bicycles and small electric cars of the “Marti” brand are rented. The logo of this brand is a technological seagull</i>	✔	

*Green interior with computers and offices for renting scooters, electric bicycles and small electric cars of the “Marti” brand. The logo of this brand is a technological green seagull*



*Green interior with employees, computers and offices where scooters, electric bicycles and small electric cars of the “Marti” brand can be rented. The logo of this brand is a technological green seagull*



*Green interior with employees, computers, offices and a research and development center where scooters, electric bicycles and small electric cars of the “Marti” brand can be rented. The logo of this brand is a technological green seagull*



*Green interior with employees, computers, offices and a research and development center where scooters, electric bicycles and small electric cars of the “Marti” brand can be rented. The logo of this brand is a technological green seagull*



*Green interior research and development center building where electric bicycles and small electric cars of the “Marti” brand. The logo of this brand is a technological seagull*



*Green , interior, Building, Seagull Marti, Logo, Technology, Brand, Computer, Research and development center, Employees, Rented, Office, Electric Cars, E-bike, Scooter, sunlight, reflected*



*Green research and development center building where electric bicycles and small electric cars of the "Marti" brand. The logo of this brand is a technological seagull. Sunlight reflected from glass*



*Green interior research and development center building where electric bicycles and small electric cars of the "Marti" brand. The logo of this brand is a technological seagull. Sunlight reflected from glass*



*Green and wooden interior research and development center building where electric bicycles and small electric cars of the "Marti" brand. The logo of this brand is a seagull. Sunlight reflected from glass. Accessible place*



*Green and wooden interior research and development center building where electric bicycles and small electric cars of the "Marti" brand. The logo of this brand is a seagull. Sunlight reflected from glass. Accessible place*



*Green and wooden facade research and development center building where electric bicycles and small electric cars of the "Martí" brand. The logo of this brand is a seagull. Sunlight reflected from glass. Accessible place*



When AI-driven design production commenced, the artificial intelligence algorithm initially did not recognize the "Martí" brand (Figure 2). As a result, the system was unable to generate relevant outputs, and after several unsuccessful attempts, more descriptive and specific prompts were input into the machine. This process gradually allowed the AI to start recognizing and understanding the brand. Over time, the scope of the production expanded significantly to include not only architectural forms and facades but also detailed interior designs and the development of products to be used within the space. In addition, the AI was trained on the brand's operational focus, which led to the generation of function-oriented interior layouts and even furniture designs that aligned with the brand's identity. Through this iterative process, the AI was able to produce refined and highly relevant results. Therefore, it can be concluded that the final outputs were visually high-quality, showcasing the potential of AI in generating brand-specific design concepts.

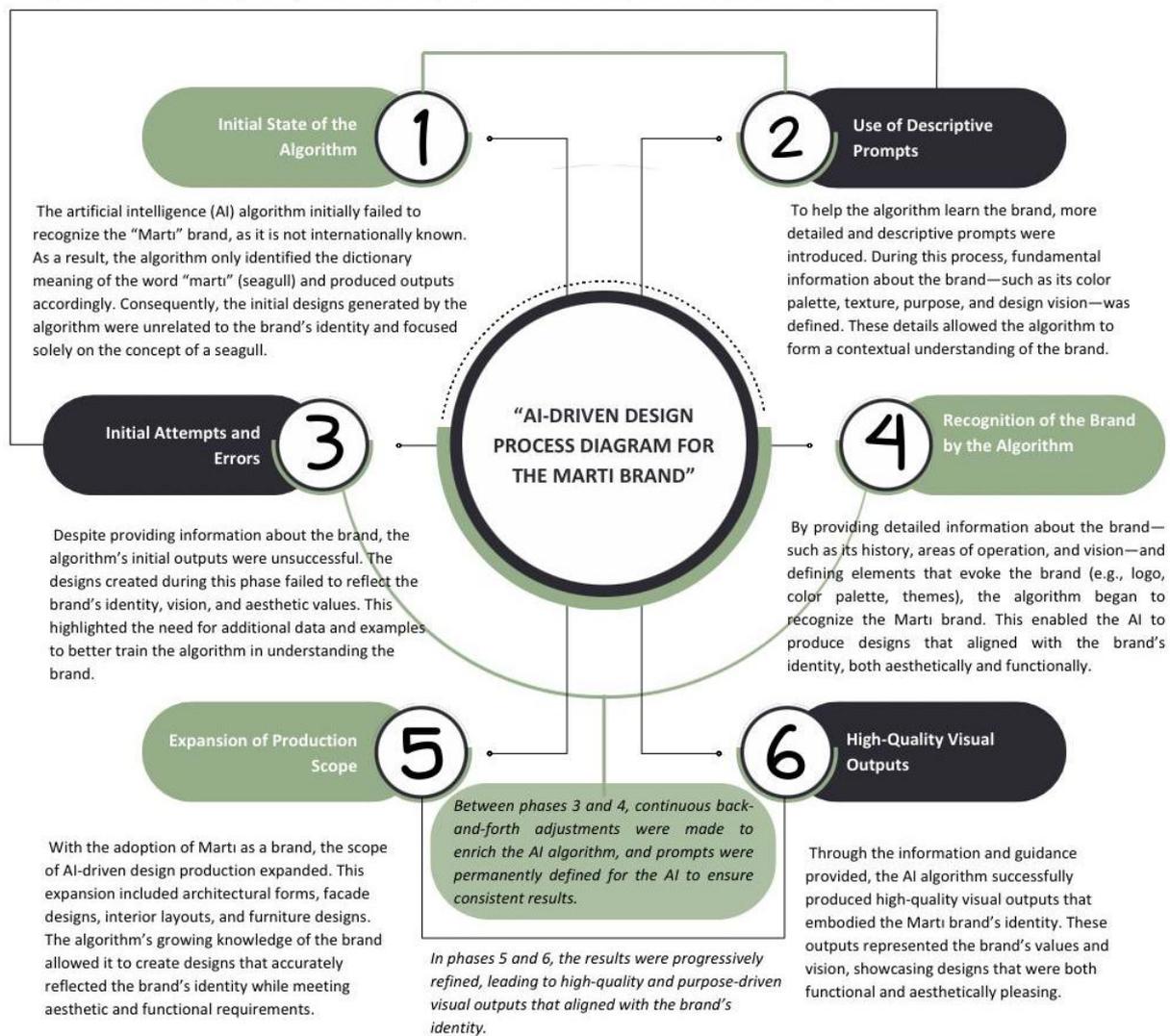
**Table 2**  
 AI Design Evaluation and Iterative Adaptation Impact

Evaluation Metrics	Keywords	Output (visual)	Recognition	Percentage Value	Comment
Global recognition of the brand	Seagull, Rented scooter, The logo of this building is a seagull, Martí		Not recognized	<input type="checkbox"/> %15	As a result of not being a global brand, the brand recognition metric did not work.
Characteristic features of the brand (color, logo, etc.)	Green interior of the "Martí" brand for renting scooters, electric bicycles and small electric cars. The logo of this brand is a technological green seagull.		Recognized	<input checked="" type="checkbox"/> %60	Successful outputs were obtained as a result of the metrics given for color, logo and function
Brand-specific values (recognition, service area, value)	Green interior with employees, computers and offices where scooters, electric bicycles and small electric cars of the "Martí" brand can be rented. The logo of this brand is a technological green seagull.		Recognized	<input checked="" type="checkbox"/> %75	After the information given about the brand, the output area has expanded.
Characteristics of the brand, its formation, vision and missions	Green research and development center building where scooters, electric bicycles and small electric cars of the "Martí" brand are rented. The logo of this brand is a technological seagull.		Recognized	<input checked="" type="checkbox"/> 80%	Brand recognition and output quality increased due to the breadth of information provided about the brand.
Keywords according to the future of the brand and desired parameters	Green , interior, Building, Seagull Martí, Logo, Technology, Brand, Computer, Research and development center, Employees, Rented, Office, Electric Cars, E-bike, Scooter, sunlight, reflected		Recognized	<input checked="" type="checkbox"/> %95	After the AI fully recognized the brand, visual outputs were enriched by adding special keywords.

During the evaluation phase, assessment metrics were established. The AI-driven images presented in Table 2 were selected in a stepwise manner based on the AI's recognition parameters, with one outcome evaluated from each stage. These stages encompass the AI's recognition of the

brand, the initial formation of an architectural identity associated with the brand, the identification of the brand’s logo and colors, the development of functional solutions, and the generation of spatial configurations aligned with the brand’s vision and mission. Ultimately, the architect’s personal preferences and stylistic approach come into play. Although AI-assisted design enables rapid production with a multitude of alternatives, the architect/interior designer retains an indispensable role in the decision-making mechanism, as their creative agency remains irreplaceable. While the process exhibits a tendency toward autonomy, the architect/interior designer assumes a decision-making role, diverging from traditional design processes while maintaining their identity as a designer.

*Between phase 2 and phase 3, due to the issues encountered, the algorithm failed to produce the expected results. Therefore, the process was revisited from phase 2, and more detailed prompts were used in order to work towards phase 3's correct outcome.*



**Fig. 2.** The process diagram

The research and experimental results indicate that in the design of spaces for a brand, communication between the brand owner and the institution, organization, or individuals responsible for creating and designing the space can be strengthened, and a tangible design example

can be presented to the brand owner in a short time. Thanks to the creative, original, autonomous, and independent features of AI [15], a design draft reflecting the brand within its boundaries can be generated. When key terms related to the brand name, the products it produces or sells, or the impressions it reflects are extracted and taught to the AI, it will be able to create a design that aligns with the brand and produce it within the defined limits.

Traditional branding processes rely on the foresight of architects and designers in physical space design, whereas AI-driven design processes expand the spectrum of design alternatives, offering a broader range of possibilities. While conventional methods require longer completion times, AI-assisted processes facilitate a dynamic design environment with rapid feedback loops. Moreover, traditional branding is generally based on a brand's corporate identity guidelines and design principles, whereas AI-driven approaches integrate these principles with extensive design data, enabling innovative solutions. AI's role as a decision support system allows brands to design their spaces more efficiently and data-driven.

The benefit of this process lies in the use of architecture as a language in the creation of the brand identity. It allows for the design of spaces that reflect the social and cultural context of the brand. However, in this context, the integration of AI into architectural design processes leads to the emergence of a new approach that simultaneously considers the functional and aesthetic dimensions of spaces [20]. AI not only creates aesthetically original designs but also aims to optimize user interactions with the space. This means aligning the functional requirements of spaces with the technological infrastructure. In this context, the aim of this study is to provide researchers with valuable insights as an experience on how AI materializes elements that reflect the identities of brands in space production.

#### **4. Conclusions**

As a result, the role and position of AI algorithms in corporate identity design are steadily increasing. The interaction between the field of architecture and the branding process not only enhances the depth of the experiences offered in brand spaces but also highlights how technology can act as a game-changer in design processes. In particular, AI bots that facilitate the conversion from text to images are reshaping architectural aesthetics and functionality, contributing significantly to the process of brand identity creation. However, the role of AI in this process becomes more meaningful when viewed as a parameter supporting the creative vision of designers. Therefore, it is crucial to regard these new technologies as more than just tools in architectural design, but as design parameters, leading to the redefinition of roles in decision-making mechanisms.

This study examines the role of AI technology in the production of architectural spaces for creating "brand identity" for a local brand. Using text-to-image technology, multiple alternatives and unique designs were generated, and the contributions of these designs to brand identity and architectural design were evaluated. During the research process, it was discovered that while AI does not recognize local brands when learning about global ones, it can be introduced through descriptive prompts. In the decision-making process, AI provided significant visual guidance, optimizing creative workflows.

Future research may explore the integration of AI with augmented reality (AR) and virtual reality (VR) to enhance interactive experiences in branding processes. AI-assisted spatial design, in particular, holds the potential to create dynamic and adaptable brand environments that improve customer experience. Additionally, the proposed method is not limited to brand identity formation but can also be applied to various fields such as urban planning, hospitality design, and retail environments. In this regard, AI-assisted design processes can be comprehensively evaluated in terms of their impact across different sectors.

In this context, this study offers a holistic process design when viewed as a process that progresses through the introduction of the brand within the intersection of technology and the field of architecture. This method is seen as an innovative approach at the intersection of architecture and brand identity, aiming to serve as a guide for future research.

### Author Contributions

Conceptualization, M.A.Ekici and T.Çelik; methodology, T.Çelik; investigation, M.A.Ekici; resources, M.A.Ekici and T.Çelik; writing—original draft preparation, M.A.Ekici; writing—review and editing, T.Çelik; visualization, M.A.Ekici; supervision, T.Çelik; project administration, M.A.Ekici; funding acquisition, M.A.Ekici. All authors have read and agreed to the published version of the manuscript.

### Funding

This study was supported by the TÜBİTAK 2209-A - University Students Research Projects Support Program (Project No: 1919B012327438).

### Conflicts of Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper. The funders had no role in the design of the study; in the collection, analyses, or interpretation of data; in the writing of the manuscript, or in the decision to publish the results.

### Acknowledgement

This study was supported by the TÜBİTAK 2209-A - University Students Research Projects Support Program (Project No: 1919B012327438).

### References

- [1] Siegel, H. & Siegel, A.M. (1982). *A Guide To Business Principles And Practices For Interior Designers*. Whitney Library Of Design, Watson, Guphill Publications, New York.
- [2] Wheeler, A., & Meyerson, R. (2024). *Designing brand identity: A comprehensive guide to the world of brands and branding*. John Wiley & Sons.
- [3] <https://www.marti.tech/>, Last Access: 24.01.2025
- [4] Kotler, P. (1997). *Marketing Management Analysis, Planning, Implementation And Control*. Ninth Edition, Practice Hall International, Inc. Upper Saddle River, New Jersey
- [5] [www.dmi.org](http://www.dmi.org), Last Access: 24.01.2025
- [6] Kapferer, J. N. (1994). *Strategic brand management: New approaches to creating and evaluating brand equity*. Simon and Schuster.

- [7] Aaker, D. A. (2012). *Building strong brands*. Simon and Schuster.
- [8] de Mozota, B. B. (1990). Design as a Strategic Management Tool. *Design Management: A Handbook of Issues and Methods*.
- [9] Baker, J., Grewal, D., & Parasuraman, A. (1994). The influence of store environment on quality inferences and store image. *Journal of the academy of marketing science*, 22, 328-339.
- [10] Kotler, P., Burton, S., Deans, K., Brown, L., & Armstrong, G. (2015). *Marketing*. Pearson Higher Education AU.
- [11] Meyer, C., & Schwager, A. (2007). Understanding customer experience. *Harvard business review*, 85(2), 116.
- [12] Goodfellow, I., Pouget-Abadie, J., Mirza, M., Xu, B., Warde-Farley, D., Ozair, S., ... & Bengio, Y. (2014). Generative adversarial nets. *Advances in neural information processing systems*, 27.
- [13] Reed, S., Akata, Z., Yan, X., Logeswaran, L., Schiele, B., & Lee, H. (2016, June). Generative adversarial text to image synthesis. In *International conference on machine learning* (pp. 1060-1069). PMLR.
- [14] Çelik, T. (2024). Generative design experiments with artificial intelligence: reinterpretation of shape grammar. *Open House International*.
- [15] Çelik, T. (2023). Architectural Design Method Suggestion with Machine Learning Technologies Based on Voronoi Diagram Principle. *Periodica Polytechnica: Architecture*, 54(1).
- [16] Çelik, T. (2023). The role of artificial intelligence for the architectural plan design: automation in decision-making. In *Proceedings of the 2023 8th International Conference on Machine Learning Technologies* (pp. 133-138).
- [17] Anantrasirichai, N., & Bull, D. (2022). Artificial intelligence in the creative industries: a review. *Artificial intelligence review*, 55(1), 589-656.
- [18] Brown, T., & Wyatt, J. (2010). Design thinking for social innovation. *Development Outreach*, 12(1), 29-43.
- [19] Xiong, J., Hsiang, E. L., He, Z., Zhan, T., & Wu, S. T. (2021). Augmented reality and virtual reality displays: emerging technologies and future perspectives. *Light: Science & Applications*, 10(1), 1-30.
- [20] Smith, C. J., & Wong, A. T. (2022, May). Advancements in artificial intelligence-based decision support systems for improving construction project sustainability: a systematic literature review. In *Informatics*, 9(2), p. 43.