

The Influence of Fatimid Architecture Heritage on Sustainable Design of Contemporary Architectural Facades

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Abstract:

Architecture is always a mirror that reflects the civilized level of all the arts of knowledge, and no country on the planet is without architectural heritage. and the Islamic architectural heritage is a civilizational achievement that crystallizes for us the Islamic civilizational personality in its prosperous eras, and the aesthetic value on which Islamic art relied is considered one of the intellectual foundations inspired by Islamic philosophy based on faith, and this value created an appropriate environment for the emergence of distinctive architectural art. The Fatimids ruled North Africa, and their architecture was characterized by simplicity, having a significant influence on local Berber architecture as well as Marrakesh and Andalusian architecture. Following the transfer of the Fatimid capital to Egypt and the establishment of the Great Cairo, the architecture changed dramatically, where the Fatimids began a massive building program, and they founded the princely city of Cairo. The original Fatimid Cairo was a luxurious palace city with marble floors grouted with gold and vast treasure houses filled with beautiful golden objects, according to contemporary writers. Most Fatimid architecture revealed their religious beliefs ,As a result, the field of preserving this heritage has become one of the most important international especially in the age of the digital revolution and its advanced technologies and modern technological capabilities. Despite widespread agreement on the aesthetics of our Arab and Islamic countries' architectural heritage, attempts to revitalize it are difficult in light of recent architectural development needs. This study deals with the Impact of Fatimid Architecture Heritage on Contemporary Architectural facades. where creating A number of design ideas for sculptural architectural facades inspired by Fatimid architectural motifs by programs of Artificial intelligence (mid-journey ai and Stable Diffusion ai) and suitable for use in contemporary architectural facades such as restaurants, commercial complexes, hotels, tourist and heritage villages, theatres, museums, plastic art exhibition halls, skyscrapers, and all types of contemporary architecture were developed. As they emphasized the identity of Islamic architecture and were compatible with modernity and contemporary architectural facades, the inspired designs combined originality and contemporary.

Keywords:

Fatimid building, Aesthetics values, Ornaments, Documentation, Design

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Introduction

Fatimid architecture is considered to be more innovative because of the variety of its buildings, both in terms of function and artistic and historical value, which bear many historical, artistic, and architectural values. Fatimid Islamic buildings are notable for their high functional value, and the first stages of Fatimid architecture in Egypt began with the construction of Cairo, which was surrounded by a brick wall with seven gates, and was followed by Mosques and a large number of schools. (Omar., 2014) The houses were magnificent, and it was assumed that they were constructed of substance rather than plaster, stone, or bricks. During the Fatimid era, the reliance on arches bearing ceilings and domes increased significantly, and forms of contracts appeared for the first time. Arabic muqarnas, which first appeared in Egypt during the Fatimid era is considered a practical implementation of descriptive geometry. In Fatimid

Egypt, the earliest appearance of inscriptions in the form of a concentric circular medallion, a multi-pointed star design, or a pentagram, and they were filled on walls, columns, and ceilings with stucco sometimes and with carved wood (Abouseif, 1998) Humanity has witnessed many destructive wars over the last century, demonstrating the vulnerability of architectural and human heritage in general in the face of the destructive power of weapons and wars. With the globalization of construction and urbanization, heritage revival faces significant challenges, and some see it as an impediment to progress. People nowadays are preoccupied with the rapid construction of new and magnificent structures, while ignoring the existence of the most valuable legacy left by the people from antiquity. (Mahdy,1992) Cultural heritage sites have been constantly destroyed as a result of the foregoing. Many have vanished due to neglect, damage factors, and various construction

ramifications, or demolition. (Pickard,1996). As a result, many subsequent generations were unable to see a significant amount of important heritage. As a result, preserving this heritage has emerged as one of the most important international priorities in confronting these problems, which are evolving their methods with the emergence of the digital revolution and its advanced technologies and modern technological capabilities. (Yeomans 2006) The Fatimid legacy is rich in aesthetic, sculptural, and architectural values that must be preserved and revitalized. So, in order to confront Globalization currents and Westernization, this study investigates the benefit of the aesthetic values of Fatimid Islamic architecture, reviving it, where one of society's most pressing issues is preserving and revitalizing the aesthetics of Islamic architecture in general, and Fatimid architecture in particular and the research problem is represented in following: -

- 1- There is a scarcity of research to benefit from the aesthetic values of sculpture in the Fatimid architectural heritage.
- 2- gravitation toward Western architecture and its imitation in ways that are incompatible with our environment
- 3- a lack of archaeological aesthetic awareness of Islamic architecture in general, and Fatimid architecture in particular, as reflected in the absence of architectural production influenced by Fatimid heritage architecture

Objectives of Research

- 1-highlighting the sculptural architectural values of the Fatimids and the possibility of resurrecting these values in contemporary architecture
- 2-creating contemporary designs from the Fatimid architectural sculpture aesthetics confirm the Islamic identity
- 3-preserve identity and heritage by documenting, analyzing, and reviving sculptural aesthetic values in Fatimid buildings
- 4- identify the decorative artistic methods that surrounded the Fatimid Architecture and highlight and analyze their decorative features

The Importance of Research

The significance of the study is based on the significance of the subject it addresses, which is the aesthetic values within the Fatimid architectural heritage, which constitutes a national wealth that is not limited to a single generation.

- 1- benefit from the aesthetics of sculpture within the Fatimid architectural heritage in order to preserve and protect it from the effects of cultural invasion.
- 2-Bring to light the aesthetic values of the decorative units in Fatimid architecture, as well as the relationship between sustainable architecture and Islamic architectural heritage.

3-shedding light on the aesthetics of Fatimid buildings, and benefit from it at facades of contemporary sustainable architecture

4-Recognizing the aesthetics of sculpture in Fatimid architecture and forging a link between the past and the present

Research Methodology

A descriptive and historical approach is used in the research.

Architectural heritage

Structures, constructions, buildings, developed sites, moveable objects, and other types of monuments, as well as their context, whether on land or underwater, are examples of archaeological heritage (Lefèvre, & Sabbioni, 2016). Architectural preservation is the process of safeguarding and preserving structures and architectural vocabulary with historical, cultural, visual, and other properties, as well as repairing them to remove distortion caused by changes in the surrounding urban environment (Abou Shousha, Farghaly, & Ma

arof, 2017). Architectural heritage is a cultural treasure that must be cared for and protected, as well as studied and clarified in order to complete its development process and become more appropriate with changing times and civilizational transformations. (Ikudayisi and Odeyale 2019) It also refers to the total number of buildings that have remained authentic and valuable in the face of constant change. Architectural heritage is a cultural treasure that must be cared for and protected, as well as studied and clarified in order to complete its development process and become more appropriate with changing times and civilizational transformations. Burke and Smith (2004) The following permanent properties are referred to as "architectural heritage": Monuments are buildings and structures with notable historical, archaeological, artistic, scientific, social, or technical significance, as well as their fixtures and fittings. (Del, Sedghpour, and Tabrizi, 2020) Building groups: These are homogeneous groups of urban or rural buildings that are coherent enough to form topographically definable units. Sites: These are man's and nature's combined works, areas that have been partially built upon and are distinct and homogeneous enough to be topographically definable, and which are of significant historical, archaeological, artistic, scientific, social, or technical interest (Jesus ., 2008).

Fatimid art

Fatimid art refers to artifacts and architecture from the Fatimid Caliphate (909-1171), a North African and Egyptian empire. The period was marked by prosperity among the upper classes, which manifested itself in the production of opulent and

finely wrought decorative art objects such as carved rock crystal, lustreware, and other ceramics, wood and ivory carving, gold jewelry and other metalware, textiles, books, and coinage. (Mitrache ,2012) (Mitrache ,2012) The Fatimids were famous for their fine art. The use of lively figurative motifs and the use of an angular, floriated Kufic script for Arabic inscriptions are the most notable features of their decorative arts. (Jesus ,2008) Many remnants of Fatimid architecture can be found in Egypt and Tunisia, particularly in the former capitals, al-Mahdiyya and Cairo. The Great Mosque is the most important surviving monument in Mahdia. In Cairo, notable examples include the Al-Azhar Mosque and the Al-Hakim Mosque, as well as al- Aqmar Mosque, Sayyida Ruqayya Mashhad, and al-Salih Tala'i Mosque (Blair & Bloom., 1996) In Cairo, there were two main Fatimid palaces that covered a large area around Bain al-Qasrayn, near Khan El-Khalili. (Alami , 2011) Parts of Badr al-city Jamali's walls, most notably three of its gates, Bab al-Futuh, Bab Al -Nasr, and Bab Zuweila have also survived.

Fatimid ornaments

Ornament is an anthropological constant used by virtually all cultures as an ornament. It is defined as an element added to a work of art to enhance its aesthetic attributes as well as the depth and legibility of its symbolic connotations. (Mitrache, 2012) Fatimid ornaments were used in the majority of the buildings that were constructed, these inscriptions were added to the introduction of new elements depicting images of birds, animals, and humans. Because the Shiite sect tolerates photography and engraving, there were no religious barriers. During the Fatimid era, architecture flourished not only in Egypt but also in the majority of areas under Fatimid control. (Abdo., , 1995) The Fatimid artist was interested in decorating surfaces with inscriptions that included a variety of elements, whether geometric, plant or human. Original decorations include the conch of the prayer niche, as well as the stucco inscriptions and arabesques on the arcades, windows, arcades, and panels, are all framed by a slightly ornate curved Kufic script. Foliated Kufic calligraphy is commonly used in building inscriptions. Dear Arches and domes frequently feature fluted decoration. Arabesque, plant, and geometric patterns are commonly used in marble, stucco, stone, or wood. The Al-SalehTala'a Mosque's decorations are also at the vanguard of the link between Fatimid, Ayyubid, and Mamluk decoration. beautifiers can be found in the Al-Juyoushi Mosque's mihrab, where the entire face has been covered in forms of factory branches and

win suckers modified into geometric shapes. 2019 (Guidetti) Fatimid invention is the use of muqarnas for decoration rather than functional armature. Persian and Coptic influences can be seen in the delineations of fish and suckers found among the factory decorations, as well as the fantastic Persian creatures. In the Fatimid decorations, the forms of Kufic script varied, as the majority of the eulogies were Kufic scripts engraved on marble and gravestone crossbeams, and the jottings were Quranic verses written in Kufic script. (Yeomans., 2006)

Palaces

The Fatimid Caliphs competed with the rulers of the Abbasid and Byzantine empires in the construction of luxurious palaces. Their palaces, their greatest architectural achievements, are only known through written descriptions. During Fatimid rule, Cairo was the epicenter of architectural activity and expression, with many palaces built on the outskirts of Cairo on the eastern bank of the Nile. (Shayestehfar et al 2021) The palaces had gold rafters to support the ceilings, and Caliphs typically requested a golden throne encased in a curtain similar to that of the Abbasid and Byzantine rulers. Furniture and ceramics were elegantly adorned with motifs of birds and animals thought to bring good luck, as well as depictions of court hunters, musicians, and dancers that reflected the exuberance of Fatimid palace life. Fountains were installed in the palaces to keep the temperature cool.(Rashed,2015)

Fatimid architecture

The Fatimid architecture of North Africa's Fatimid Caliphate (909-1167 CE) combined elements of eastern and western architecture, drawing on Abbasid, Byzantine, Ancient Egyptian, Coptic, and North African traditions; it bridged early Islamic styles and Egypt's medieval architecture of the Mamluks, introducing many innovations. (Blair & Bloom 1996) The main cities of Mahdia (921-948), Al-Mansuriya (948-973), and Cairo were rich in Fatimid architecture (973–1169). During the Fatimid rule, the heart of architectural activity and expression was in Cairo, on the eastern side of the Nile, where many palaces, mosques, and other buildings were built. 2015 (El-Barambali) Al-Aziz Billah (ruled 975-996) is considered to as the most prolific Fatimid builder, with at least thirteen major landmarks including the Golden Palace, the Cairo Mosque, castles, bridges, and public baths. (Williams, 2018). Several surviving tombs, mosques, gates, and walls, primarily in Cairo, retain their original elements, despite extensive modification or rebuilding in later periods. The Great Mosque of Mahdiya, the Al- Azhar Mosque,

the Al-Hakim Mosque, Juyushi and Lulua of Cairo, three Fatimid-era gates in Cairo, Bab al-Nasr, are all notable extant examples of Fatimid architecture, Bab al-Futuh and Bab Zuweila built under the orders of the vizier Badr al-Jamali have survived. (Abdo., , 1995) although they have been altered over the centuries, they have Byzantine

architectural features, with little trace of the eastern Islamic tradition. (Fathallah, 2019) The Fatimids also made considerable development toward mausoleum building. The Mashhad, commemorating a descendant of the Prophet Muhammad was a ideal example of Fatimid architecture. (Eid, 2018)



Fig .(1) illustrates Gates of Fatimid Cairo

The relation of sculpture and architecture

Architectural sculpture is the use of sculptural techniques by r sculptors in the designs of any project In architectural sculpture, the sculpture is frequently incorporated into the structure of a building, and free-standing works are considered part of the original design. 2016 (Al Balasy) Architectural sculpture can also be defined as a sculpture that is an integral part of a building or a sculpture that is specifically designed to decorate or beautify a building. This architectural sculpture can be found in Egyptian, Mesopotamian, Roman, Greek, and other ancient civilizations' architecture. (Fathallah, 2019) Architecture is a three-dimensional artistic formation, and architectural sculpture is a three-dimensional work of art. Architecture sculpture combines function and beauty. It refers to buildings built by combining sculpture and architecture in order to combine the various aesthetics of sculpture, where architectural sculpture hides irregularities in architectural structures and gives them aesthetics by connecting the shapes to the architectural structure . (Balk, & Allmer, 2016) Architecture, as an engineering art, is built with materials such as iron, stone, plaster, cement, and other building materials and is based on scales, dimensions, volumes, masses, ratios, and proportions. Architecture, according to this definition, is a functional formation that ensures human safety. (Le and Nguyen, 2021) , Many people are unaware of the connection between

architecture and the plastic arts in general, and the art of sculpture in particular, (2015) (Esmailzadeh & BASIRI). (Le., & Nguyen . 2021)

Mausoleums

Many mausoleums were built with the Fatimid settlement; this type of construction was an architectural manifestation of the officially sanctioned cult of saints and martyrs. These Fatimid Period tombs and domes in Cairo represent the earliest and largest related group of funerary architecture surviving from the first six centuries (Kammoun . & Ben Saci , 2016) The Mashhad is a typical Fatimid structure, a shrine commemorating a descendant of the Prophet Muhammad. The Fatimid caliphs' tombs were also revered as shrines. The majority of Mashhads were simple square structures with domes, but a few of the mausoleums at Aswan were more complex and included side rooms, During the al-reign of Al Hafiz's Bellah, Several mausoleums and mosques were rebuilt to honor notable Shi'i female figures. The caliphs also erected mausoleums for their wives and daughters. (Omar, 2014) Mausoleum construction began in Fatimid Cairo at the beginning of their reign, and various patterns of this type of architecture are preserved, such as Mashhad al-Lu'lu'a (406/1016), Mashhad al-Juyushi, Sayyida Ruqayya, and Yahya al-Shabib in the Fustat cemetery. The majority of Fatimid mausoleums have been destroyed or significantly altered by later renovations. (Williams, (2018).

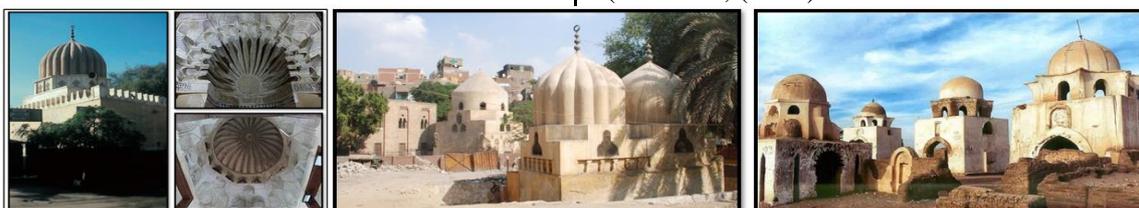


Fig.(2) illustrates Mausoleums of Fatimid era

The Mosques

Fatimid mosques' distinctive architectural styles include protruding portals from the wall, domes above mihrabs and qiblas, porches and arcades with keel-shaped arches supported by a series of columns, façade ornamentation with iconographic inscriptions and stucco decorations. The mosques were built on the hypostyle plan, with a central courtyard surrounded by arcades and roofs supported by keel arches, which were originally supported by columns with Corinthian capitals. (Kammoun. and Ben Saci, 2016) Later columns frequently had a bell-shaped capital that was mirrored to form the base. The prayer niche was more ornately designed, with features such as a dome or transept. The woodwork on the doors and inside the buildings was frequently finely carved. There are two kinds of Quranic quotations on the main facades of Fatimid royal mosques. (El-Akkad,2013) Isma'ili's first contribution was

Quranic verses associated with religious ideologies. The second category included popular Quranic verses. The vast majority of these were depicted in a symbolic form on prominent architectural elements of the façades. As a result, there may have been a link between the architectural form of a mosque and its epigraphic program on Fatimid mosques. Williams (1983) To put it another way, ideologically charged Quranic quotations were prominently displayed on the façade. There are no Quranic epigraphic programs of Fatimid Mosque interiors built by an imam caliph or vizier. Abouseif (1998) Early Fatimid mosques lacked a minaret. Later mosques built in Egypt and Africa included brick minarets that were most likely part of their original designs. These were derived from early Abbasid minaret forms. Minarets later evolved to the distinctive mabkhara (incense burner) shape. (Frishman et al., 2002)

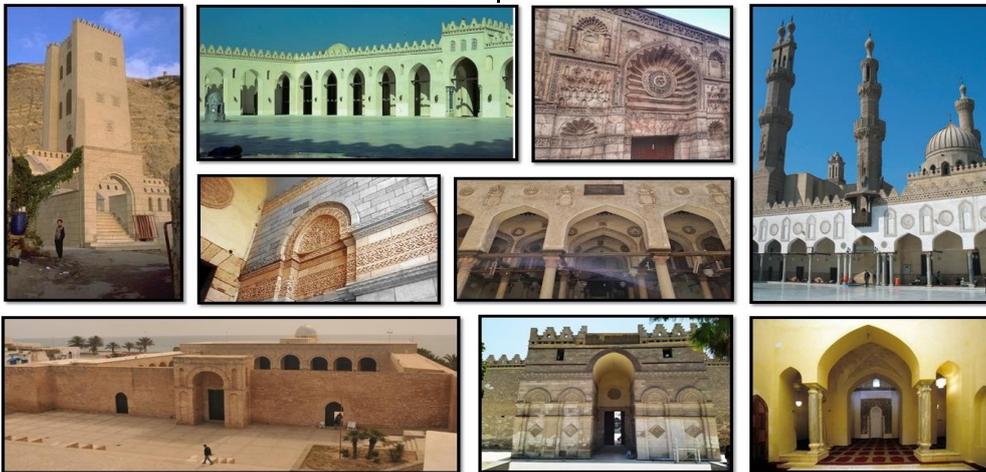


Fig.(3) illustrates Fatimid mosques

The facade

The word facade is derived from facies, the Latin word for face, and refers to the outside wall of a building. The term's anthropomorphic provenance is suggestive of various analogies, all related to that which a facade conveys to someone standing across from it. (Pell, 2012)

The architectural façade

The architectural façade is a covering conceived to satisfy the comfort and security requirements as well as aesthetic requirements that animate the built landscape, and the ornament of contemporary architecture is the reflection of the new material technologies and of technical reasoning. However, usage of ornament on façades has not just been used for establishing beauty in the past either. (Sendi., 2014) Ornament was the reflection of social and psychological contexts. Architectural ornament might not be a structural element which would affect the stability of the construction or

conveyance of the system, although it is an element which gives meaning and identity to the building. (SAĞLAM, 2013) After Modernism or since Post-modernism), we have been witnessing an increasing interest in composition and, nowadays, designing a facade is reassuming an important role in architecture practice due, in part, to the support of digital technologies. The usage of ornament could be seen as merely adding decorative elements on facades and not adding anything to the functionality of the building. Ornament usually associates with the façades or the plasticity of buildings; yet it also establishes relationships with the building and the urban fabric.(Opincariu , (2011)

Environmentally sustainable design (also called environmentally conscious design, eco-design, etc.) is the philosophy of designing physical objects, the built environment, and services to comply with the principles of ecological sustainability and is also aimed at improving the health and comfortability of

occupants in a building (Francisco, & Stipo. 2015) Sustainable design seeks to reduce negative impacts on the environment, and the health and well-being of building occupants, thereby improving building performance. The basic objectives of sustainability are to reduce the consumption of non-renewable resources, minimize waste, and create healthy, productive environments . The sustainable design aims to support development “that meets the needs of the present without compromising the ability of future generations to meet their own needs. . (Kim.,1998) Urban sustainability is a way of planning cities that improves the social, economic, and environmental conditions to ensure the quality of life and well-being of current and future residents. Sustainable designs are the concepts, plans, and methods for implementing urban sustainability.(Yu et al ,2022) The need for sustainable design arises from the pressure cities are experiencing through both urban growth and climate change effects. The term “design” is here used to refer to practices applied to the making of products, and services, as well as business and innovation strategies—all of which inform sustainability. Sustainability can be thought of as

the property of continuance; that is, what is sustainable can be continued .(McLennan, 2004)

Research Methodology

The research follows experimental and analytical methods. The methodology of the research consists of two parts **as follows:**

The first part deals with the literature review about the Influence of Fatimid Architecture Heritage on the Sustainable Design of Contemporary Architectural Facades

The second part deals with the experimental work which is creating designs by using ornaments Fatimid Architecture Heritage, computer programs (photoshop and illustrator), and Artificial intelligence (midjourney ai and Stable Diffusion ai)

The innovative designs

The second section

All Innovative designs were prepared for contemporary architectural facades that are inspired by ornaments of Fatimid architecture by computer programs (photoshop and illustrator) and Artificial intelligence (midjourney ai and Stable Diffusion ai)



Fig. (4) illustrates five different innovative designs, it is a design for buildings suitable for museums designs features an unconventional sculptural architectural façades inspired by the Fatimid architecture ornaments of the façade of Al-Aqmar Mosque by using midjourney ai and Stable Diffusion ai programs .

The three models for the building's are circular shape and appears to be one piece, and it is distinguished by balance, unity, and unconventional

shape, as well as it clearly and distinctly combines heritage and contemporary.

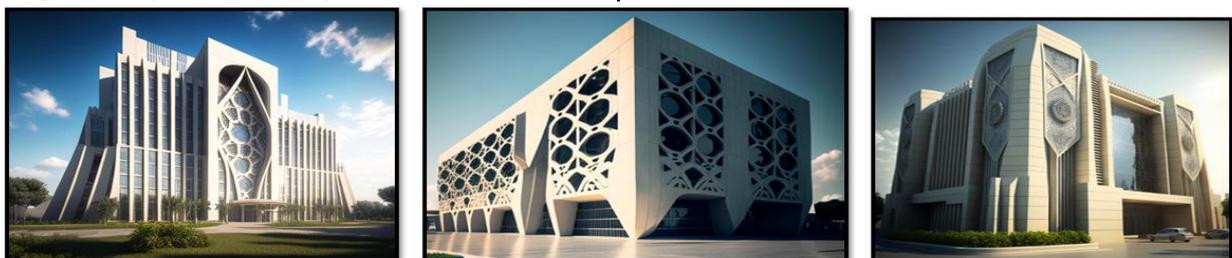


Fig. (5) illustrates three different innovative design; it is a design for buildings suitable for Train stations or Governmental administrative buildings or Police Department ... etc. designs features an unconventional



sculptural architectural façade inspired by the Fatimid architecture decoration by using midjourney ai and Stable Diffusion ai programs.

The three designs for the buildings are unconventional shape and it is distinguished by Varsity, rhythm balance, unity and unconventional

shape, as well as it the architectural facade is Unconventional sculptural and combines originality and contemporary



Fig. (6) illustrates four different innovative designs, it is a design for buildings suitable for plastic arts exhibition halls designs features an unconventional sculptural architectural façades inspired by the Fatimid architecture ornaments by using midjourney ai and Stable Diffusion ai programs .

The four models are Unconventional and appears to be one piece, The facades of the buildings are innovative to suit the function as a

plastic arts exhibition hall with a sculptural façade in addition to combines originality and modernity



Fig. (7) illustrates three different models for innovative design, these designs for buildings suitable for Restaurant, Mall, hotel, etc. ... designs features unconventional sculptural architectural façades inspired by the Fatimid architecture ornaments by using

midjourney ai and Stable Diffusion ai programs. The designs for the building's facades are Unconventional shapes and it is distinguished by

the architectural facade is unconventional and combines originality and contemporary.



Fig. (8) illustrates two different models for innovative design, it is a design for buildings suitable for Islamic community centers in non-Muslim countries, and designs feature unconventional sculptural architectural façades inspired by the Fatimid architecture ornaments by using midjourney ai and Stable Diffusion ai programs.

The designs for the buildings are Unconventional shapes and it is distinguished by unity, and unconventional shape, as well as the architectural

facade is unconventional and combines originality and contemporary.

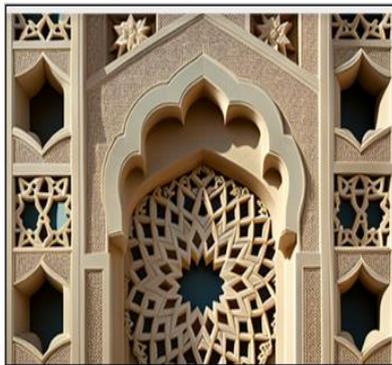


Fig. (9) illustrates six different models for innovative design, these designs for Part of the Sculptural facades of buildings of Heritage homes To clarify the aesthetics of the sculpture on the facade. designs feature unconventional sculptural architectural façades inspired by the Fatimid architecture ornaments by using midjourney ai and Stable Diffusion ai programs.

The designs for the building's facades are miscellaneous, Clear and part of the façade was made to show the decorative details inspired by the Fatimid architecture, Innovative sculptural

destinations are suitable for access to tourist and heritage villages, such as the Nubian Village in Aswan and the Heritage Village in Cairo to emphasize Islamic identity.



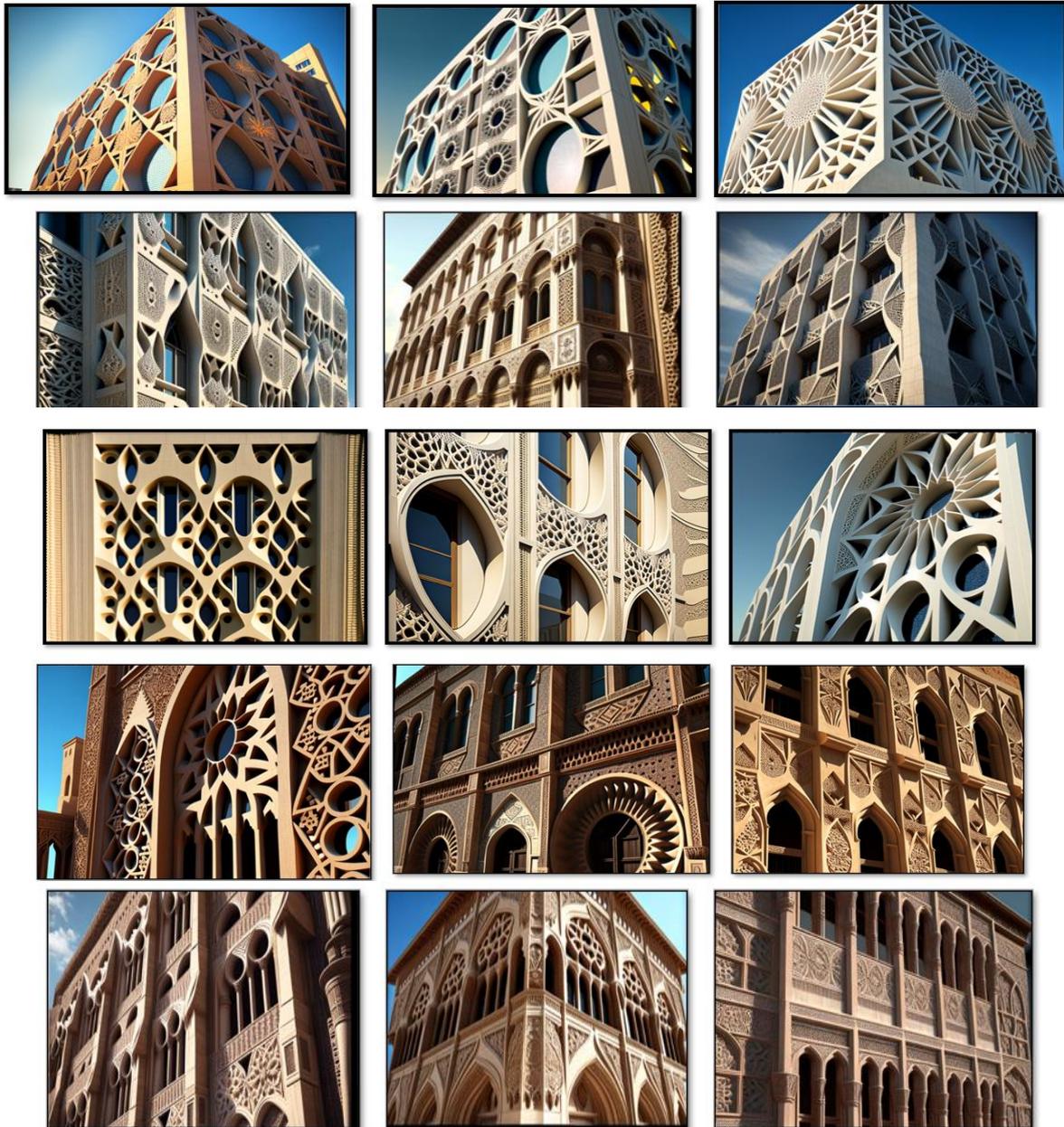


Fig. (10) illustrates eighteen different models for innovative design, these designs for Part of the Sculptural facades of buildings of various uses, restaurants, museums, administrative buildings for government or private institutions, skyscrapers, hotels, ...etc. designs feature unconventional sculptural architectural façades inspired by the Fatimid architecture ornaments by using midjourney ai and Stable Diffusion ai programs.

The designs for the building's facades are miscellaneous, Suitable for various architectural facades, Clear and part of the façade was made to

show the decorative details inspired by the Fatimid architecture and these designs combine originality and contemporary, Uniqueness and diversity



Fig. (11) illustrates three different models for innovative design, these designs for Part of the Sculptural facades of buildings of designs feature an unconventional sculptural architectural façade inspired by the Fatimid architecture ornaments by using midjourney ai and Stable Diffusion ai programs .

The designs for the building's facades are miscellaneous, Suitable for various architectural facades , Clear and part of the façade was made to

show the decorative details inspired by the Fatimid architecture and combine originality and contemporary.



Fig. (12) illustrates two different models for innovative design, it is a design for buildings suitable for Islamic universities, and designs feature an unconventional sculptural architectural façade inspired by the Fatimid architecture ornaments by using midjourney ai and Stable Diffusion ai programs.

The design for the buildings is a new shape, as well as the architectural facade, is Unconventional

sculptural and combines originality and contemporary.



Fig. (13) illustrates three different innovative designs, it is a design for buildings suitable for modern hotels , designs feature unconventional sculptural architectural façade inspired by the Muqarnas and arches of Fatimid architecture by using midjourney ai and Stable Diffusion ai programs.

The three models for the buildings are cylindrical shape Which gives them distinction, and appears unconventional as well as combine heritage and modernity and are suitable for all local and foreign cultures.

Results

1. The design represents the most important pillar of architectural facades, where the design of architectural facades reflects the internal function of the building.

- 2. The innovative facades emphasized the building's identity through balance, rhythm, and unity.
- 3. The study emphasized the importance of utilizing Fatimid heritage in scientific research.
- 4. By connecting architecture and the arts, modern architectural trends must provide aesthetic properties in order to achieve building compatibility with the surrounding environment.
- 5. The first factor in determining a building's success or failure is its façade.

7. Sculptural contributes to the aesthetics of architecture by organizing and allowing the architectural form to be read.
8. The abundance of sculptural formations in various forms, such as geometric and floral patterns and Calligraphy ornamentation at Fatimid architecture.
9. Sculptural ornamentation in the Fatimid era was distinguished as having the same aesthetic values across time periods.
10. Fatimid architecture had a broad architectural perspective on all aspects of human social, psychological, and cultural life.
11. The ability to create contemporary architecture inspired by Fatimid architectural heritage responds to the spirit of the times and its capabilities because it is not associated with any particular time or element
12. the first time carved stone was used instead of bricks in mosque facades, and the facades were decorated with various decorations engraved on the stone in Fatimid architecture is

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