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Humanizing Sacred Routes: Design Framework for Cairo's Religious Pathways

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Abstract Religious pathways embedded within historic urban contexts serve as pivotal cultural and spiritual conduits; however, they often lack contemporary design strategies integrating users' functional and experiential needs. The Imam Hussein–Bab Zuweila pathway in Cairo suffers from fragmented spatial identity, environmental discomfort, commercial intrusion, and inadequate spiritual resonance. This study aims to develop a comprehensive design framework to humanize this corridor by evaluating and integrating five weighted pillars: comfort (0.15), spirituality (0.3), guidance (0.15), cultural expression (0.2), and urban integration (0.2). The analysis yielded weighted total scores ranging from 246.75 to 249.85 (out of a maximum 300), indicating moderate overall performance with room for improvement, based on analytical and applied methodology using a mixed-methods approach including field observations, spatial mapping, semi-structured interviews, and a 5-point Likert scale questionnaire administered to 250 participants across three key areas: Imam Hussein Square, Al-Muizz Street Entrance, and Bab Zuweila Entrance. Results reveal weighted scores ranging from 246.75 to 249.85 across zones. Bab Zuweila Entrance achieved the highest performance (249.85) with strong spirituality (75) and cultural expression (50), though guidance and urban integration require improvement. Al-Muizz Street Entrance (249.00) showed low spirituality (75.0) due to commercial intrusion, while Imam Hussein Square (246.75) demonstrated high spirituality (73.2) and guidance (37.5). Analysis identified five critical design gaps: lack of cohesive spatial identity, inconsistent materiality, environmental discomfort, over-commercialization, and neglected spiritual signage. Practical implications include actionable strategies for heritage preservation, balancing modern livability. Socially, it promotes inclusive spaces sustaining collective memory and community engagement. Limitations include a lack of long-term seasonal data and quantitative microclimate measurements, suggesting future research should integrate environmental simulation tools. This comprehensive design framework bridges the gap between heritage preservation and contemporary urban needs. The research contributes actionable insights for transforming sacred routes into vibrant, livable spaces that honor spiritual significance while serving modern urban communities.

Keywords Cultural Heritage, Design Framework, Human-Centered Design, Islamic Heritage, Religious Pathways, Urban Renewal

1. Introduction

Religious pathways are not merely physical routes connecting sacred sites but profound symbols intertwined with spirituality, culture, and collective memory. Historically, these paths served as central components of religious rituals and daily life in many Islamic cities, blending practical movement with deeper metaphysical meanings [1]. However, despite their significance, many of these sacred routes remain underdeveloped regarding human-centered design, which prioritizes users' physical and spiritual needs [2]. This design gap limits their potential to serve as both meaningful public spaces and spiritually enriching environments.

The specific pathway under study, linking the Imam Hussein Mosque and Bab Zuweila Gate in Cairo, as shown in Figure 1, is of considerable religious and cultural importance [3]. However, it faces challenges from deteriorating physical conditions and a lack of cohesive design that integrates modern needs with spiritual and cultural heritage. Despite its central location in Islamic Cairo, the path struggles to provide a seamless user experience, failing to evoke the spiritual resonance essential to its sacred character [4].

This study aims to address these challenges by proposing a comprehensive design framework that enhances the human and spiritual experience along the path. This framework integrates five critical pillars: comfort, spirituality, guidance, cultural expression, and urban integration, each reflecting a key aspect of humanizing the path. These elements are assessed through a comparative analysis of global pilgrimage routes, including those in Medina, Istanbul, and Santiago de Compostela, and then applied specifically to the Imam Hussein to Bab Zuweila path.

By examining these factors and identifying key design strategies, the study proposes a framework that aims to transform religious pathways into vibrant, livable spaces that remain spiritually significant while accommodating the demands of modern urban life. The research contributes practically to urban design and heritage conservation, offering strategies that can be applied to other sacred pathways worldwide, particularly in Islamic cities.

The following research questions guide the study:

- How can religious pathways be redesigned to balance spiritual symbolism with modern livability?
- What spatial and experiential elements contribute to humanizing sacred routes?
- How can a comparative analysis of global pilgrimage routes inform a design approach specific to the Cairo context?

This study employs the Balance Weight Technique to quantitatively assess the humanization of Imam Hussein to the Bab Zuweila path, based on the five pillars: comfort, spirituality, guidance, cultural expression, and urban integration. The evaluation integrates responses from 250 participants, distributed across different areas along the path.

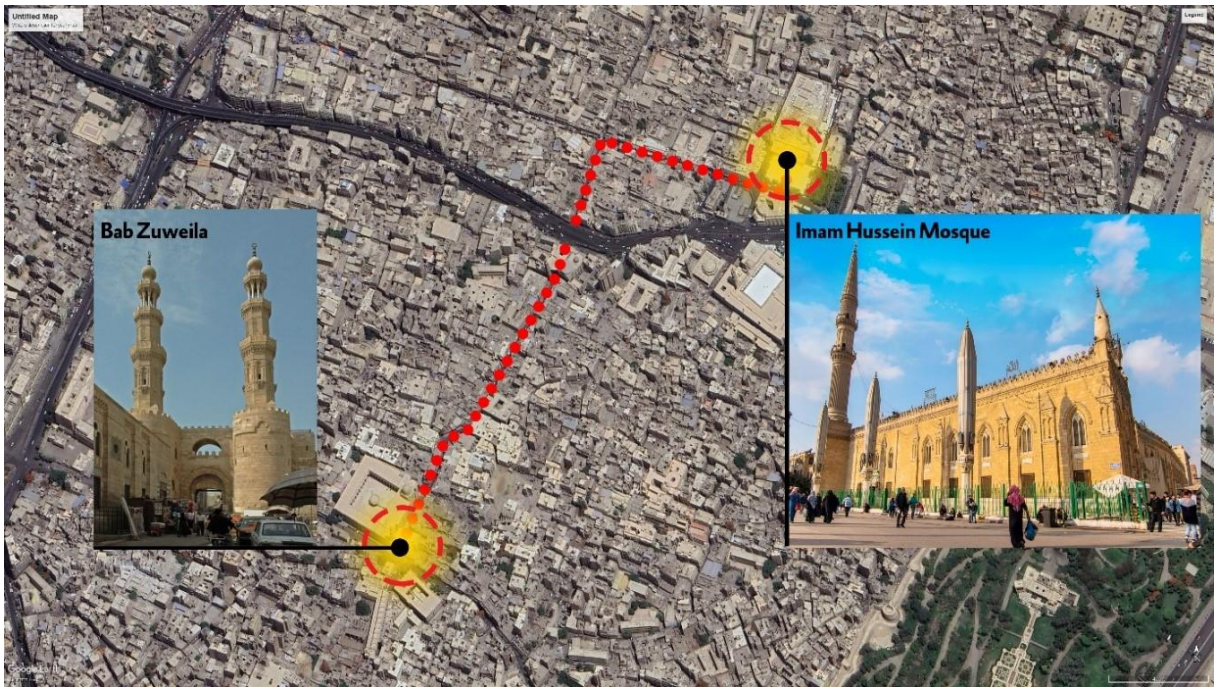


Figure 1. Map showing the route between Bab Zuweila and Imam Hussein Mosque in Cairo, with images of both landmarks. Source (Adapted by Author)

1.1. Humanization in Urban Design

Humanization in urban spaces revolves around designing environments prioritizing human needs, perceptions, behaviors, and emotional responses [2]. Scholars like Jan Gehl and William H. Whyte emphasize that public spaces should enhance comfort, safety, accessibility, and participation [5]. According to Gehl, urban design should focus on how people use a space, not just how it looks from above [6]. Human-centered design emphasizes tangible materials, shade, seating, visual attention, and walkability elements that enhance the lived experience of urban users [7].

In religious contexts, humanization must go beyond the physical aspect to include emotional and spiritual resonance [8, 9]. It is about physical comfort and how spatial qualities evoke reverence, tranquility, and a sense of belonging [10].

1.2. The Sacred Path as a Spatial Ritual

Religious paths function as ritual landscapes, where movement is imbued with symbolic meaning. Drawing on concepts from the phenomenology of place and ritual theory [11]. These paths are more than mere connectors; they are performative spaces where belief is practiced, internalized, and shared. Walking carries multiple spiritual layers in Islamic architecture, especially toward sacred destinations [12]. The journey becomes a form of worship (suluk in Sufi terminology), and the path transforms into a center for contemplation, purification, and encounter with the sacred. The built environment along these paths, scale, enclosure, lighting, and sound, can either enhance or hinder these spiritual dimensions [11, 12].

1.3. Dimensions of Religious Pathway Design

To support both the practical and metaphysical roles of sacred paths, specific design standards must be considered:

- Spatial Continuity: A clear, legible pathway form should be maintained for smooth movement and symbolic alignment [13].
- Materiality and Texture: Natural or traditional materials can enhance historical continuity and sensory connection [14].
- Enclosure and Openness: Alternating narrow and wide spaces can evoke self-reflection or communal presence [15].
- Thresholds and Guiding Elements: Visual cues, minarets, domes, gates, or changes in paving can signal spiritual transitions or prepare the user for sacred encounters [16].

Kevin Lynch's (1960) work on legibility and readability is particularly relevant here, as he suggests that clarity in spatial direction contributes to meaningful movement experiences [17].

2. Materials and Methods

2.1. Research Methodology

This study adopts a mixed-methods approach combining qualitative spatial analysis with quantitative survey evaluation. Qualitative methods include field observations, spatial mapping, and archival review, while the quantitative assessment uses a 5-point Likert-scale questionnaire (250 respondents) analyzed via the Balance Weight Technique to generate comparable pillar scores, as shown in Figure 2.

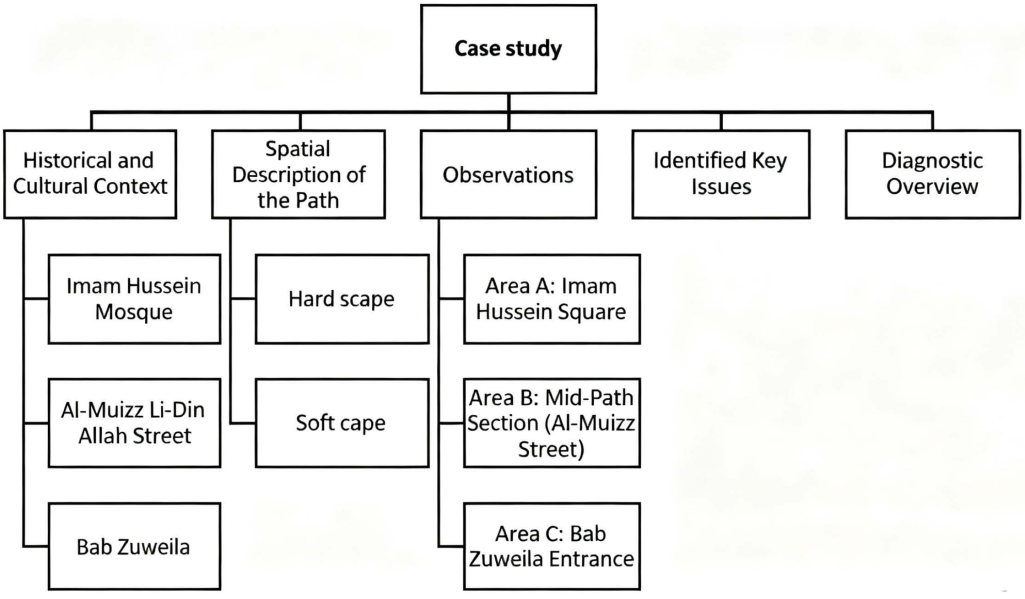


Figure 2. Research methodology flowchart outlining the case study, context, spatial analysis, observations, and key issues for the Imam Hussein–Bab Zuweila path. Source (Author)

A comparative case study approach was employed to analyze selected religious pathways and extract design principles relevant to the humanization of Imam Hussein to the Bab Zuweila path in Cairo. The research combined visual-spatial analysis, field observation, and an interpretative assessment of the lived and spiritual experiences along the path. Previous studies informed this approach of the significance of religious pathways in cities such as Medina, Istanbul, and Santiago.

- Theoretical Framework: Establishing key principles and design considerations for religious pathways, informed by relevant urban design and architecture theories.
- Analysis of Previous Case Studies: Drawing on lessons learned from religious paths in Medina, Istanbul, and Santiago, to understand how similar pathways have been humanized and the impacts of design interventions.
- Applied Case Study: Focusing on the Imam Hussein to Bab Zuweila path in Cairo, assessing the existing spatial, spiritual, and cultural qualities of the path and its potential for human-centered design interventions.

To ensure a rich, multi-dimensional understanding of the site, the following data collection tools will be utilized:

- Field Observations: Documenting the spatial conditions, user behavior, and temporal changes along the path, including how individuals engage with the space during different times of day or across seasons.
- Spatial Mapping: Utilizing manual or GIS-supported mapping to record key nodes, thresholds, visual axes, and movement patterns, identifying areas of high activity and areas needing improvement.
- Semi-structured interviews (questionnaire): Engaging with local users, vendors, and religious authorities through a structured survey to gather symbolic and practical perceptions of the path. The survey involved 250 participants who rated the five key pillars of the path, comfort, spirituality, guidance, cultural expression, and urban integration, using a Low, Medium, or High scale for each pillar.
- Literature and Archival Review: Reviewing historical maps, planning documents, and religious texts related to the path's significance, providing contextual depth to understand the site's cultural and historical importance.

After collecting the qualitative and questionnaire data using the above tools, the study applied a Balance Weight Technique to transform participants' ratings into comparable scores for each pillar and area along the path. The responses from the 250 participants were then categorized and weighted by perceived importance: comfort (0.15), spirituality (0.3), guidance (0.15), cultural expression (0.2), and urban integration (0.2). These adjustments reflect the relative significance of each pillar based on participant ratings, with spirituality and cultural expression carrying greater weight due to their importance to the overall experience of the path. The weighted scores for each area (Imam Hussein Square, Entrance of Al-Muizz Street, Bab Zuweila Entrance) were aggregated to comprehensively evaluate the path. Weights derived from participant prioritization survey (n=50 pilot), where spirituality ranked highest (30%), reflecting its core role in religious pathways.

2.2. Evaluation Framework: The Five Pillars

The spatial and experiential performance of the Imam Hussein–Bab Zuweila path will be evaluated using a five-pillar framework developed from the literature and analysis of previous cases. Each pillar represents a crucial dimension in the design of human-centered religious paths:

- Comfort: Ease of physical movement, comfort, accessibility, protection from sun/weather
- Spirituality: The emotional and metaphysical resonance of the path includes opportunities for contemplation, prayer, and symbolic engagement.
- Guidance: Clarity of movement, presence of landmarks, and intuitive navigation
- Cultural Expression: Clarity of local identity, authenticity of materials, and traditional aesthetics
- Urban Integration: Seamless connection with the surrounding context (built fabric and function)

Each section of the path will be evaluated using these five pillars on a qualitative 5-point Likert scale: Strongly Disagree, Disagree, Neutral, Agree, Strongly Agree.

The 5-point Likert scale provides ordinal quantitative data suitable for weighted aggregation, complemented by qualitative field observations for contextual depth. The approach is supported by comparative urban design research, where similar ordinal scales have been adopted and validated for urban environment quality assessment, notably by Delsante (2016) in evaluating Lodi and Genoa. This method enables nuanced, site-specific interpretation while maintaining rigor and allowing meaningful comparisons across cases and disciplines. Accordingly, the qualitative ratings in this study reflect a methodologically robust paradigm consistent with best practices in the field.

2.3. Methodological Limitations

This research acknowledges the following limitations:

- Lack of immediate quantitative data (e.g., pedestrian flow, microclimate readings)
- Limited access to detailed government design plans or future interventions
- Time constraints in fieldwork may miss long-term or seasonal patterns

3. Analytical Study of Contemporary Religious Path Models

3.1. The Pedestrian Pathway of the Prophet's Mosque, Medina

This project modernizes a historically significant religious route connecting the Prophet's Mosque and the Quba Mosque. The design integrates pedestrian walkways, seating areas, and spiritual signage, prioritizing user comfort while preserving the religious solemnity of the space, as shown in Figure 3 [18].

(a)

(b)

Figure 3. (a) Existing pathway with wide roads. (b) Redesigned pathway with wide walkways, coordinated vegetation areas, and more pedestrian spaces. Source (Adapted by Author)

3.2. Sultanahmet Pathway, Istanbul

This area features multiple religious axes, including those linking Hagia Sophia and the Blue Mosque. The pathway is defined by squares, fountains, and visually striking vistas. It highlights the power of visual framing, urban gradation, and the celebratory rhythm inherent in the religious movement, as shown in Figure 4 [19].

Figure 4. Sultanahmet Pathway with Hagia Sophia, highlighting the visual framing, urban gradation, and religious movement inherent to the space. Source (Adapted by author)

3.3. Camino de Santiago, Spain

This Christian pilgrimage route extends hundreds of kilometers and has inspired design elements such as resting areas, symbolic signage, and natural landscape framing. Although outside the Islamic context, it demonstrates how long-distance spiritual walking can be enriched through slow-paced urban development and experience-driven design, as shown in Figure 5 [20, 21].

Table 1 shows an analysis of Contemporary Religious Path Models.

While previous examples provide valuable insights into the design of religious paths, few integrate a comprehensive framework that blends comfort, spirituality, urban integration, cultural identity, and visual guidance into a single model. Moreover, the specific spatial logic of Islamic cities, characterized by an organic urban fabric, social-religious gradation, and local aesthetics, requires a context-sensitive design approach.

Thus, this research contributes to the discourse by formulating a comprehensive framework specifically designed for the spiritual, historical, and formal realities of the Islamic sacred path, the Imam Hussein Path, at Bab Zuweila in Cairo.

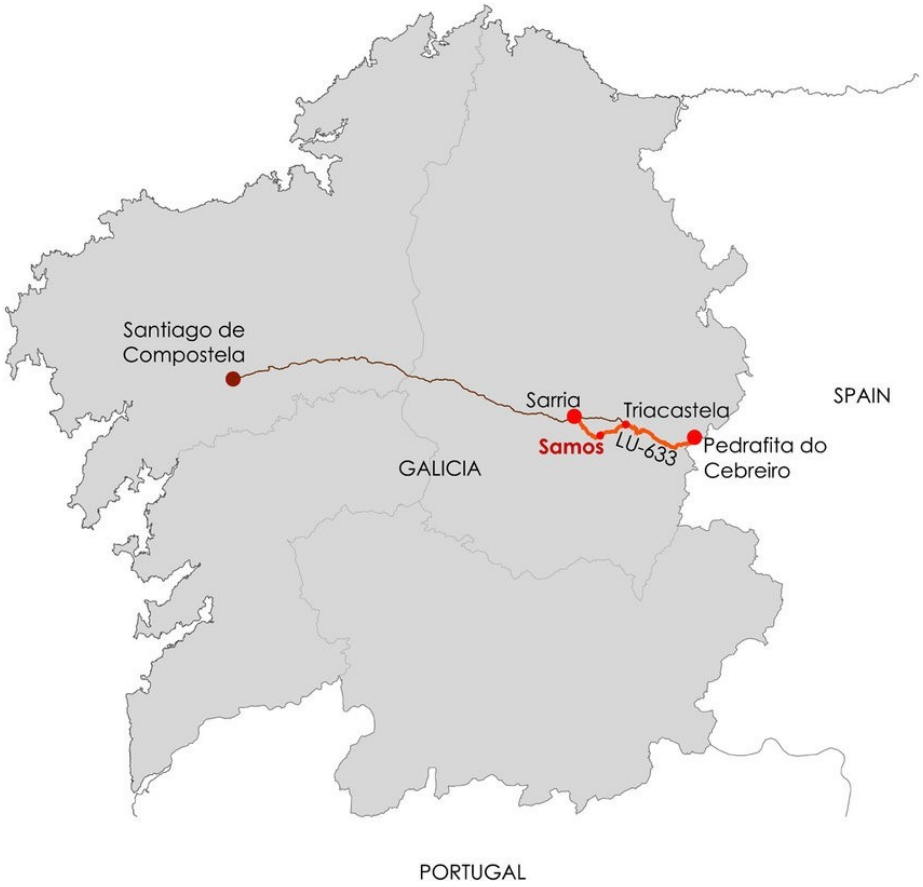


Figure 5. Map of the Camino de Santiago pilgrimage route, highlighting its long-distance path. Source [20]

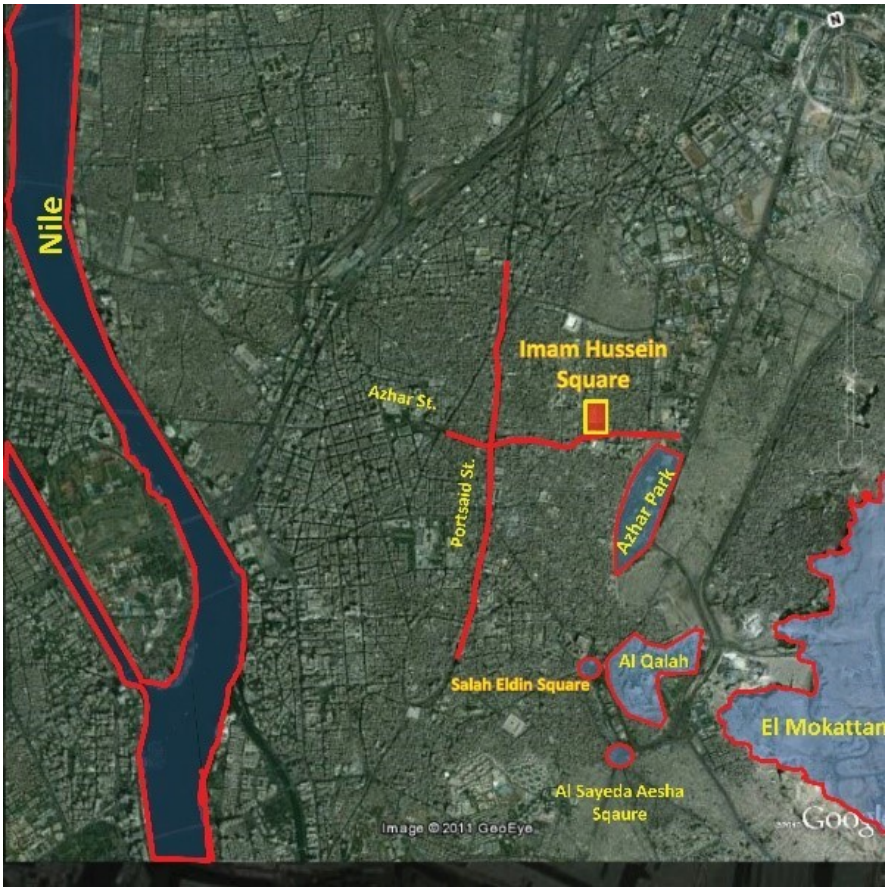
Table 1. Analytical Table of Contemporary Religious Path Models: Key Characteristics and Design Features. Source (Author)

Aspect	Quba Path (Medina)	Sultan Ahmed Path (Istanbul)	Pilgrimage Path (Santiago)
Primary Function	A daily path connecting two mosques	A religious-historical passage	A spiritual pilgrimage, individual and collective
Location	Saudi Arabia	Turkey – Istanbul	Spain and Western Europe
Target Audience	Visitors, residents, and religious tourists	Residents, tourists, mosque visitors	Pilgrims, spiritual seekers, adventurers
Nature of Use	Daily/Seasonal	Touristic/Permanent, crowded	Long seasonal (weeks)
Urban Design	Paved paths, canopies, lighting, and organized axes	Pedestrian squares, trees, and architectural symbolism	Natural paths, yellow markers, supporting villages
Sensory Comfort	Canopies, shade, water, and seating areas	Garden environment, sea breeze, contemplative spaces	Scenic views, terrain changes, periodic stops
Signage and Guidance	Smart boards, Islamic symbols	Ground signs, clear landmarks	Yellow markers, ground maps, digital apps
Spiritual Identity	Islamic architecture – Prophetic symbolism	Byzantine–Ottoman, call to prayer sound	Historical Christian, Santiago Cross
Supporting Elements	Benches, shaded areas, and resting places	Gardens, cafes, and seating areas	Inns, water stations, prayer spaces
Accessibility	Wide paths, suitable for the disabled	Suitable for pedestrians and the elderly	Terrain challenges, gradual solutions
Social Harmony	High – Collective spiritual interaction	High – Spiritual and family tourism	Individual – Meditative – Connections with other pilgrims
Path Temporal Dimension	Short (1-2 km)	Medium (Central religious square)	Long (200–800 km)

4. Case Study: Imam Hussein – Bab Zuweila Path – Cairo

4.1. Overview

The path from the Imam Hussein Mosque to Bab Zuweila is part of historic Cairo, a UNESCO World Heritage site rich in Islamic architecture, cultural memory, and a multi-layered urban fabric, as shown in Figure 6. This path traces a series of religious, commercial, and civic spaces developed over the centuries, representing a miniature model of Cairo's spiritual and social life [22].



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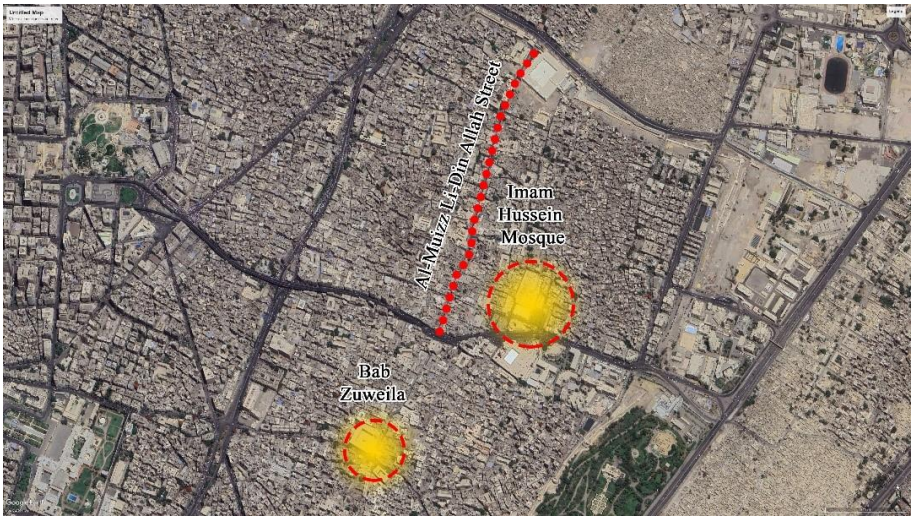


(b)

Figure 6. (a) Satellite image showing the location of Imam Hussein Square and surrounding areas in Cairo. (b) Detailed map highlighting the Imam Hussein Mosque and Bab Zuweila along Al-Muizz Li-Din Allah Street. Source (Adapted by Author)

- Imam Hussein Mosque: A revered Shiite site of high pilgrimage value.
- Al-Muizz Li-Din Allah Street: One of the oldest streets in Islamic Cairo, hosting numerous religious landmarks and traditional markets.
- Bab Zuweila: A historic gate symbolizing protection and the transition between the city's sacred and secular exterior.

This path functions as a spiritual procession, especially during religious seasons such as the birthday of Imam Hussein. However, on regular days, it oscillates between religious reverence, tourism activity, and daily commercial use.

4.2. Spatial Description of the Path and Observation

The physical composition of the path includes:

- Narrow alleyways and more expansive open spaces.
- Highly decorative facades, often cluttered with signs and informal vendors.
- Inconsistent paving and materiality are affecting walkability and coherence.
- Multi-functional edges: religious buildings, shops, food stalls, artisan markets.
- This diversity presents opportunities and challenges; it reflects the vibrancy of Cairo but often lacks spatial clarity and environmental comfort.

Using the evaluation matrix, the main sections of the path were qualitatively assessed based on the data from the Likert scale charts:

- Area A: Imam Hussein Square
  - Comfort: Medium to High (Agree): The square has ample open space with clear visual orientation. While comfort is generally positive, the absence of sufficient seating and shade could still be improved.
  - Spirituality: Medium (Neutral): Although the area holds high symbolic value, it is frequently disrupted by noise and congestion, limiting its spiritual appeal.
  - Guidance: Medium (Neutral): The path's linearity is maintained, but wayfinding and signage are inconsistent, resulting in slight navigation challenges.
  - Cultural Expression: High (Agree): The architecture of Imam Hussein Square is rich in historical elements, reflecting Fatimid and Ottoman influences that enhance its cultural identity.
  - Urban Integration: Medium (Neutral): The square is somewhat disconnected from the surrounding movement patterns, as its design does not fully integrate with the adjacent streets.
- Area B: Mid-Path Section (Al-Muizz Street)
  - Comfort: Low (Disagree): This section faces challenges such as limited shade, uneven paving, and occasional vehicle interference, all of which significantly reduce comfort.
  - Spirituality: Low to Medium (Neutral): While prominent historical mosques are along the path, the sensory overload from commercial activity detracts from a contemplative atmosphere.
  - Guidance: Medium (Neutral): The linearity of the street path is largely maintained, but inconsistent signage and unclear wayfinding detract from the overall ease of navigation.
  - Cultural Expression: High (Agree): The area is rich in traditional crafts, materials, and architectural authenticity, offering a deep cultural experience for visitors.
  - Urban Integration: Medium-High (Agree): The area connects well with surrounding commercial and residential functions, though pedestrian-vehicle conflicts reduce seamless flow.
- Area C: Bab Zuweila Entrance
  - Comfort: Medium (Neutral): The area has constrained space, and while there are some resting areas, they are insufficient. The comfort rating indicates areas for improvement in seating and accessibility.
  - Spirituality: High (Agree): The Bab Zuweila gate holds a substantial symbolic and spiritual value, marking a significant threshold and offering a more peaceful atmosphere than other sections.
  - Guidance: Medium-High (Agree): A clear visual axis to the gate aids orientation, though minor signage gaps remain.
  - Cultural Expression: Medium (Neutral): The gate's historic architecture conveys a strong identity, but the surrounding signage and vendor displays dilute the traditional aesthetic coherence.
  - Urban Integration: High (Agree): The Bab Zuweila Entrance is well-integrated with surrounding neighborhoods and serves as a spatial and symbolic threshold, making it a key part of the city's urban fabric.

4.3. Identified Key Issues

The key issues identified along the Imam Hussein–Bab Zuweila path are based on an in-depth evaluation of the site's spatial and experiential characteristics. These issues are categorized into five main areas: environmental comfort, spiritual disconnection, visual chaos, accessibility challenges, and fragmented spatial identity, as shown in Table 2. Each category highlights specific challenges that impact the overall experience of the path, including physical discomfort, spiritual disengagement, visual clutter,

accessibility limitations, and the lack of a cohesive spatial narrative. These observations provide critical insights into improving the design and functionality of the path, aiming to create a more harmonious, user-friendly environment.

Table 2. Key Issues Mapped to Five Pillars. Source (Author)

Key Issue	Affected Pillar(s)	Description
Environmental discomfort	Comfort	Inadequate shade, lack of seating, and inconsistent paving
Spiritual disconnection	Spirituality	Excessive commodification reduces the spiritual atmosphere.
Visual chaos	Guidance + Cultural Expression	Overabundant signage, chaotic facades between historical and modern layers
Accessibility challenges	Comfort + Urban Integration	Uneven surfaces, lack of tactile paths, or seating for the elderly
Fragmented spatial identity	All five pillars	No unified narrative or rhythm along the path

4.4. Summary: Diagnostic Overview

The Imam Hussein–Bab Zuweila path holds profound symbolic value as a sacred route, yet it suffers from fragmentation in its spatial and experiential functions. The absence of a cohesive spatial narrative leads to a diminished spiritual atmosphere, as the sensory overload of commercial activity, poor environmental comfort, and visual clutter overshadows it. Specific issues, such as limited shade, uneven surfaces, overcrowded signage, and a lack of accessible seating, further contribute to the path's fragmented identity, making it difficult for visitors to fully engage with its spiritual significance. This diagnostic analysis sets the stage for the following section, presenting actionable design recommendations and results evaluation.

5. Results

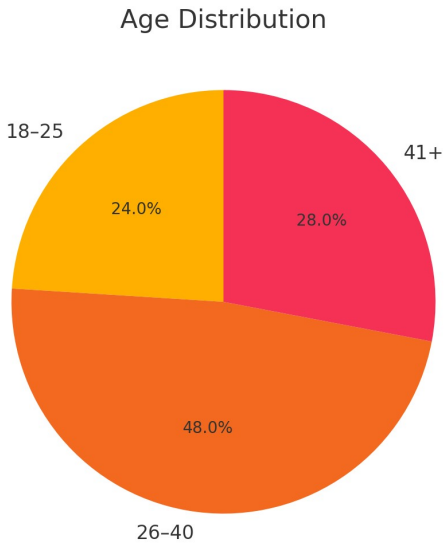
5.1. Participant Demographics

Understanding the demographic characteristics of study participants is essential for interpreting the spatial and perceptual insights drawn from the survey. This study engaged 250 respondents, representing a demographically diverse sample of Cairo's urban population, who contributed their evaluations of the Imam Hussein to Bab Zuweila religious pathway. Data on age, gender, employment status, and educational background reveal key dimensions that influence user perception and spatial experience. Capturing this range enhances the reliability and inclusiveness of the findings, ensuring that the proposed design interventions respond to a broad spectrum of user needs. The following charts illustrate the demographic distribution across the surveyed population, as shown in Figure 7.

While the survey captured age, gender, employment, and education demographics (Figure 7), it did not stratify respondents by familiarity with the area (e.g., residents, tourists, workers, first-time visitors). This broad sampling approach was intentionally adopted to reflect diverse pathway users in line with the daily urban flow.

5.2. Weighted Evaluation of Path Areas

The study evaluated the path across five key pillars: comfort, spirituality, guidance, cultural expression, and urban integration. The evaluation was conducted using responses from 250 participants, with each pillar rated using a Low, Medium, or High scale.



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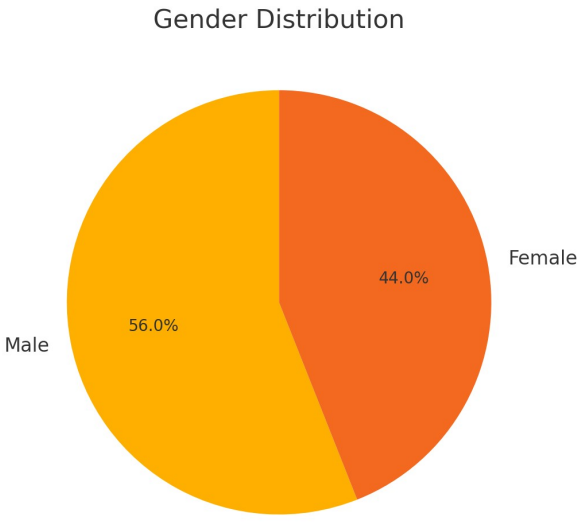

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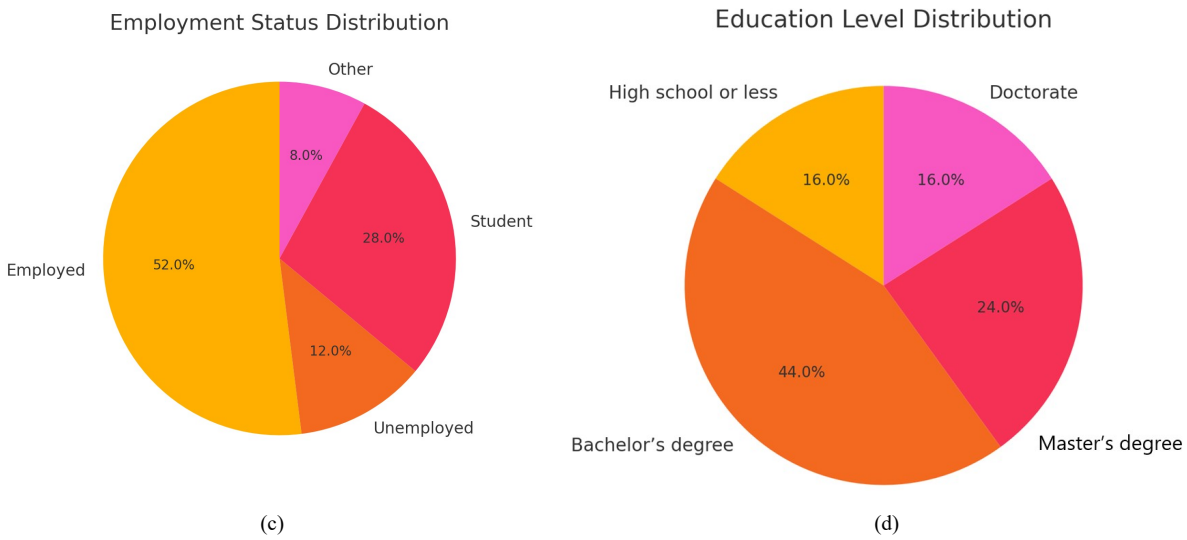

(c) (d)

Figure 7. Demographic characteristics of study participants. Source (Author). (a) Age distribution of survey participants. (b) Gender composition of the respondent group. (c) Employment status breakdown of participants. (d) Educational attainment levels

Table 3. Presents pillar scores calculated using the Balance Weight Technique: individual Likert responses (1–5 scale) were averaged per area/pillar, multiplied by pillar weight and scaling factor (×10), then summed for totals (max 300). Source (Author)

Area	Comfort Weighted Score	Spirituality Weighted Score	Guidance Weighted Score	Cultural Expression Weighted Score	Urban Integration Weighted Score	Total Weighted Score
Imam Hussein Square	36.45	73.2	37.5	49.8	49.8	246.75
Entrance of Al-Muizz Street	37.5	75	36.9	50	49.6	249
Bab Zuweila Entrance	37.5	75	37.35	50	50	249.85

Table 3 presents the weighted scores for each pillar across the three main areas of the path: Imam Hussein Square, the Entrance of Al-Muizz Street, and the Bab Zuweila Entrance. Based on participant ratings, the scores reflect how well each area performs in each pillar.

Scores calculated as (Raw Likert score × Pillar weight × 10) per area, aggregated across 250 respondents. Pillar weights: Comfort (0.15), Spirituality (0.3), guidance (0.15), Cultural Expression (0.2), Urban Integration (0.2). Maximum per pillar = 100; total maximum = 300. Example for Imam Hussein Spirituality: (4.88 average Likert × 0.3 × 10) = 73.2.

The data presented in Table 4 provide a detailed analysis of participants' ratings across various pillars in three key areas: Imam Hussein Square, the Entrance of Al-Muizz Street, and the Bab Zuweila Entrance. Imam Hussein Square stands out with particularly positive evaluations in spirituality and cultural expression. For spirituality, 68 participants (28%) strongly agree, and 50 participants (20%) agree, collectively reflecting a favorable perception. Similarly, cultural expression received strong ratings: 62 participants (24.8%) were neutral, 62 (24.8%) agreed, and 83 (33.2%) strongly agreed; However, guidance and urban integration show room for improvement. In guidance, 38 participants (15.2%) disagree, and 50 participants (20%) are neutral. Urban integration also faces challenges, with 33 participants (13.2%) disagreeing and 50 participants (20%) being neutral. These figures suggest areas for improvement in these pillars at Imam Hussein Square.

In contrast, the entrance to Al-Muizz Street displays a more varied distribution of opinions. Spirituality is a key challenge here, with 17 participants (6.8%) strongly disagreeing and 50 participants (20%) disagreeing. Urban integration also faces considerable dissatisfaction, as 45 participants (18%) disagree, and 57 participants (22.8%) are neutral. The data indicate that enhancing the spiritual atmosphere and addressing urban integration could better align with participants' expectations.

Bab Zuweila Entrance shows a more mixed distribution of responses, with spirituality receiving relatively positive ratings; 67 participants (26.8%) agree, and 83 participants (33.2%) strongly agree. However, guidance and urban integration present challenges, with 38 participants (15.2%) disagreeing and 38 participants (15.2%) neutral on guidance. Urban integration is similarly divided, with 50 participants (20%) neutral and 50 participants (20%) disagreeing. The results suggest that while certain aspects are appreciated, guidance and urban integration require further attention to enhance the overall experience in this area.

Table 4. Participant Distribution for Each Pillar and Area. Source (Author)

Area	Pillar	1 (Strongly Disagree)	2 (Disagree)	3 (Neutral)	4 (Agree)	5 (Strongly Agree)
Imam Hussein Square	Comfort	28	39	38	68	70
	Spirituality	27	52	50	49	66
	Guidance	19	38	58	58	77
	Cultural Expression	21	21	62	62	83
	Urban Integration	33	33	50	50	83
Entrance of Al-Muizz Street	Comfort	18	18	54	71	89
	Spirituality	17	50	50	50	83
	Guidance	28	50	28	50	90
	Cultural Expression	33	33	50	67	67
	Urban Integration	26	45	57	59	61
Bab Zuweila Entrance	Comfort	17	33	50	67	83
	Spirituality	33	17	50	67	83
	Guidance	19	38	38	58	96
	Cultural Expression	29	29	59	59	74
	Urban Integration	17	50	50	83	50

5.3. Discussion

The weighted scores, as shown in Table 3, reveal moderate performance across areas (246.75–249.85/300), confirming qualitative observations from section 4 while highlighting pillar-specific priorities.

Imam Hussein Square (246.75) excelled in spirituality and cultural expression but requires improvement in guidance and urban integration.

Al-Muizz Street Entrance (249.00) showed the lowest spirituality due to commercial pressures, despite good urban integration.

Bab Zuweila Entrance (249.85) performed strongly in spirituality/guidance but lagged in cultural expression.

While this study focused on pillar-specific weighted scores, future analyses could employ correlation analysis (e.g., Pearson's r) to examine inter-pillar relationships and cross-tabulations to explore user-type differences (residents vs tourists), potentially revealing predictive patterns such as stronger Spirituality-Cultural Expression correlations.

6. Conclusion and Recommendations

6.1. Conclusion

This study presents a framework to humanize the Imam Hussein to Bab Zuweila path in Cairo by integrating comfort, spirituality, guidance, cultural expression, and urban integration. The evaluation reveals strengths, particularly in cultural identity at Imam Hussein Square, but also highlights challenges such as environmental discomfort and commercial intrusion along the path. These findings emphasize the need for urban design that balances the preservation of spiritual significance with modern urban demands.

Although this research offers valuable insights, it has limitations, including the absence of quantitative data on pedestrian movement and environmental conditions. Future studies should incorporate such data and explore technology integration to enhance the user experience. Further research could also apply the framework to other Islamic cities, offering a broader understanding of how to design sacred urban pathways.

In conclusion, this study contributes to the field by introducing a practical, five-pillar design framework to guide interventions that enhance the spiritual and functional performance of religious pathways, thereby supporting the continued relevance of these sacred routes within contemporary urban environments.

6.2. Recommendation

Based on the findings of this study, several recommendations are proposed, as shown in Table 5, to enhance the humanization of Imam Hussein to the Bab Zuweila path and similar religious pathways. These suggestions aim to address the spatial and experiential challenges identified and foster environments that balance modern urban needs with spiritual and cultural significance.

Table 5. Participant Distribution for Each Pillar and Area. Source (Author)

Recommendation	Target Pillar(s)	Addressing Issues
Shaded areas, seating, and improved paving	Comfort	Environmental discomfort
Prayer spaces, sacred markers	Spirituality	Spiritual disconnection
Vendor/signage regulation	Spirituality; Cultural Expression	Commercial intrusion; Visual chaos
Smart signage, interactive maps	Guidance; Comfort	Inconsistent wayfinding; Environmental issues
Longitudinal studies, framework adaptation	All pillars	Ensure sustained impact and transferability

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