

Raneem Anwar

Landscape Architect

Architect

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I am a Landscape Architect and a master's degree holder in the same interdisciplinary field, with six years of experience in landscape architecture and urban design. My professional background includes roles as a technical architect and landscape designer on various project scales, showcasing proficiency in AutoCAD, Revit, 3ds Max, Photoshop, Rhino, and Grasshopper. As a PhD Candidate, I am deeply passionate about exploring innovative concepts, and I have a keen interest in digital twin technology in the field of neurological urban design and landscape architecture. In my research capacity, I work as a researcher for the Smart and Future Cities Research Laboratory, where I address the interdisciplinary aspects of urban design, exploring its connections with computational design, digital fabrication, and artificial intelligence. Furthermore, I bring experience in Virtual Reality (VR), Unreal Engine program, and 3D scanning to the table. Currently, I work as a Lecturer assistant at Ain Shams University Faculty of Engineering.

EDUCATION

PhD Candidate (In Progress)

University: Ain Shams University

Faculty: Faculty of Engineering

Field: Landscape Architecture

Research Focus: Neuro-Landscape: Utilizing brainwaves recordings and immersive realities as an Evidence based design approach for enhancing outdoor built environments

Master of Urban Design (Current)

University: Cairo University

Faculty: Faculty of Urban and Regional Planning

Thesis Topic: "Using Healing Landscape as a Tool for Designing a Blue-Way System to Integrate New Landscape Concepts into Riverfront Corridor Urban Spaces, Fostering a Healthy Living Community."

Bachelor of Landscape Architecture

University: Ain Shams University

Faculty: Faculty of Engineering

Department: Architecture

Program: landscape architecture

Years Attended: 2013-2018

Total GPA: 3.5 (Excellent)

Graduation Project GPA: 3.9 (Excellent)

TECHNICAL SKILLS

- | | |
|-----------------------------|-----------------------------|
| • AutoCAD program | • Post-production Photoshop |
| • Architectural Revit | • Rhino |
| • 3ds max | • Grasshopper |
| • Microsoft office programs | • Forma |

SOFT SKILLS

- | | |
|---|-----------------------------------|
| • Critical Thinking: Analytical | • Time Management |
| • Problem Solving and practical solutions | • Task Handling |
| • Communication Effective | • Adaptability: Flexible Approach |

WORK EXPERIENCE

Assistant Lecturer (Part-Time)

2019-Current

Faculty of Engineering, Ain Shams University
Cairo, Egypt

As a dedicated Teaching Assistant within the Faculty of Engineering at Ain Shams University, I have consistently contributed to the academic excellence of our institution. My responsibilities have primarily focused on courses that pertain to urban design, sustainability, and landscape architecture design aspects.

Key Achievements and Responsibilities:

- **Course Specialization:** I have actively engaged in various courses, including but not limited to Eco-urban design, sustainability in landscape architecture, In Situ Development, Soundscape and aural architecture, Outdoor noise propagation, Sustainable architecture design studios, Urban Economics, Graduation Project for environmental architecture program, Graduation project for housing architecture and urban development PROGRAM, Building 1 studio and Sustainable urban landscape.
- **Educational Support:** I have supported students in their pursuit of academic excellence. This has involved assisting in lectures, conducting workshops, and providing one-on-one guidance to students, fostering a conducive learning environment. "In pursuit of these objectives, I have seamlessly integrated a diverse range of pedagogical methods to cultivate an immersive learning environment. This integration includes the incorporation of cutting-edge technologies such as digital fabrication and virtual reality (VR) tools, empowering students to engage deeply with their design concepts and experience them in an immersive and holistic manner."

Senior Researcher (Full Time)

2020-Current

Smart and Future Cities Laboratory
Faculty of Engineering, Ain Shams University
Cairo, Egypt

In my capacity as a Researcher, I am actively engaged in the Smart and Future Cities Laboratory for Sustainable Urban Solutions, an initiative generously funded by STIFA through capacity-building grants within the Faculty of Engineering at Ain Shams University

Key Achievements and Responsibilities:

- **Urban Smart Cities and AI Focus:** holding pivotal role in steering the research endeavors related to urban smart cities and urban artificial intelligence within the Smart and Future Cities Laboratory. My work involves in-depth exploration, analysis, and innovation in these domains, contributing to the advancement of sustainable urban solutions.
- **Digital Fabrication specialist:** Facilitating digital fabrication services for students and practitioners, providing expertise in 3D modeling, slicing, and machine operation. Managing and maintaining laser cutters and 3D printers, ensuring optimal performance. Assisting in troubleshooting and optimizing fabrication processes. Coordinated lab resources, scheduled machine time, and managed material inventories.
- **Architectural Software Proficiency:** providing comprehensive training in various architectural software tools, including Architectural Revit, 3D Max, Design Builder, and AutoCAD. These training sessions cater to both undergraduate students and aspiring professionals in the environmental sector, ensuring they are well-equipped with essential digital tools.
- **VR and 3D Scanning:** My role extends to training individuals in the effective utilization of virtual reality (VR) and 3D scanning technologies, enabling them to harness these immersive tools for architectural and urban design applications.

WORK EXPERIENCE

Instructor

2021-Current

Smart and Future Cities Laboratory

Faculty of Engineering, Ain Shams University

Cairo, Egypt

I conduct and facilitate workshops and training sessions in the field of digital fabrication, empowering participants with knowledge and skills pertaining to digital fabrication techniques utilizing 3D printing and laser cutting tools as well as softwares such as grasshopper and fusion 360 within the scope of summer and winter workshops.

3D Fabrication and Build: Furniture as Exercise Workshop

Summer 2021

1. **Description:** This workshop centered on the design and fabrication of functional furniture pieces, integrating 3D modeling and digital fabrication techniques.
2. **Role:** Designed furniture components using Rhino, prepared and optimized models for 3D printing with Prusa Slicer and Mesh mixer, and ensured machine compatibility using RdWorks. Operated laser cutters and 3D printers for the fabrication process.
3. **Software Used:**
 - Rhino for modeling
 - Prusa-Slicer and Mesh-mixer for slicing and optimizing 3D models
 - RdWorks and Prusa-Slicer for machine compatibility
4. **Machines Used:** Laser cutter, 3D printers

Smart Home Digital Fabrication Workshop

Summer 2022

1. **Description:** This workshop focused on designing and fabricating smart home devices, combining digital modeling and fabrication techniques.
2. **Role:** Developed detailed models and assemblies of smart home devices using AutoCAD and Fusion 360, prepared models for 3D printing with Prusa Slicer and Mesh mixer and ensured compatibility with fabrication machines using RdWorks. Utilized laser cutters and 3D printers for creating device components.
3. **Software Used:**
 - AutoCAD and Fusion 360 for modeling and assembly
 - Prusa-Slicer and Mesh mixer for slicing and optimizing 3D models
 - RdWorks for machine compatibility
4. **Machines Used:** Laser cutter, 3D printers

Critical Thinking and Digital Fabrication Workshop

Winter 2023

1. **Description:** This workshop aimed at enhancing critical thinking skills through the application of digital fabrication technologies.
2. **Role:** Created and assembled models using AutoCAD and Fusion 360, optimized models for 3D printing with Prusa Slicer and Mesh mixer and ensured machine compatibility using RdWorks. Managed the operation of laser cutters and 3D printers for the fabrication tasks.
3. **Software Used:**
 - AutoCAD and Fusion 360 for modeling and assembly
 - Prusa Slicer and Mesh mixer for slicing and optimizing 3D models
 - RdWorks for machine compatibility
4. **Machines Used:** Laser cutter, 3D printers

The Findings of this workshop was documented into an academic publication

WORK EXPERIENCE

Landscape Designer

october 2021- February 2022

Cairo, Egypt

Key Responsibilities:

- Collaborated as a key member of the design team entrusted with the creation of precise landscape shop drawings for prominent projects, including the public plaza, Memorial, and public park in the New Capital City.
- Proficiently utilized AutoCAD and Revit softwares to produce detailed landscape design drawings and shop drawings, ensuring accuracy and adherence to project specifications.

Urban Planning Interdisciplinary Committee Member

october 2021- February 2023

Faculty of Engineering, Ain Shams University

Cairo, Egypt

Key Responsibilities:

- Serving as a dedicated committee member within the Faculty of Engineering at Ain Shams University, contributing to the development of an Urban Character Guide commissioned by the National Organization for Urban Harmony. This pivotal guide shapes the future of urban planning initiatives.
- Collaboratively engaged with interdisciplinary experts to synthesize urban planning concepts and standards into a comprehensive guide for harmonious urban development.

Participatory Planning Coordinator

october 2021- october 2022

BECT, GIZ

Cairo, Egypt

As the Participatory Planning Coordinator for the Ain Shams Urban upgrading Plan project, generously funded by GIZ and moderated by the BECT office. This project plays a pivotal role in advancing sustainable urban upgrading.

Key Responsibilities:

- Facilitating seamless coordination among a diverse range of stakeholders and experts to ensure the effective implementation of participatory planning strategies.
- Taking charge of the preparation of comprehensive participatory planning reports, providing valuable insights and documentation of the planning process.
- Organizing and leading stakeholders' participatory workshops, fostering a collaborative environment for community members to actively contribute to urban upgrading decisions.

Freelance Instructor

october 2022- December 2022

Cairo, Egypt

As a Freelance Instructor, I had the privilege of taking on a pivotal role in the I-challenge program, supported by I-hub institution, with a specific focus on the Climate Change track.

Key Responsibilities:

- Serving as the lead instructor, providing comprehensive guidance and mentorship to participants throughout the competition.
- Assuming a supervisory role, overseeing the development and progress of individuals and teams, ensuring they were well-prepared to address climate change challenges.
- Collaborating with the I-challenge program and i-hub institution to create an engaging and educational learning environment, fostering innovative solutions and raising awareness about climate change issues.

RESEARCH PROJECTS

Crowd Management Report Project

Saudi Arabia

Iconic Consultant

I actively engaged in the analysis phase of the Road No. 1 from Mina to Muzdalifah development project. My multifaceted role included:

- Leveraging a diverse set of crowd management approaches and employing cutting-edge urban analytics tools such as the Grasshopper Urbano plugin
- Diligently preparing a comprehensive development guideline report that offered valuable insights recommendations to optimize transportation efficiency, safety, and accessibility along the entire route.

Urban AI MOOC

Smart and Future Cities Laboratory
Faculty of Engineering, Ain Shams University

Joint collaboration with
African Cities Lab

I served as a dedicated Researcher in the Urban AI MOOC project, tackling the preparing of the first urban AI mooc. This pioneering project was generously funded by Meta Research grants as a component of the 'Ethics in AI Research Initiative for Africa,' meticulously coordinated by the Human Sciences Research Council (HSRC) of South Africa.

https://courses.africancitieslab.org/courses/course-v1:SFCL_Ainshamsuniversity+001+2023/about

Key Responsibilities:

- Active participation in the research efforts aimed at advancing ethical considerations in AI applications within the context of smart city planning and development.
- Collaboration with a multidisciplinary team to conduct rigorous research, gather data, and draft insightful reports and recommendations to drive the project's objectives.
- I was included in the filming of the MOOC (Massive Open Online Course) and provided various sessions on topics such as AI and equitable cities, digital twin technology in smart cities, socio-technical solutions, justice-driven urbanism, sustainability, spatial equity, and ethical considerations surrounding AI.

The Cairo Charter

Smart and Future Cities Laboratory
Faculty of Engineering, Ain Shams University

Joint collaboration with
university of the Arts London

As a researcher, I had the privilege of contributing to the development of the “Cairo Charter”. This transformative framework is designed to promote the integration of social and environmental justice-driven AI principles within the context of smart city planning and development, encompassing Cairo, the African continent, and beyond.

The development of the Charter was a product of integrated design research, fostering collaboration among a diverse group of experts and community innovators. This groundbreaking project was made possible through the generous support of The Human Sciences Research Council and Facebook Research underlining its significance in the realm of AI ethics and its application to urban planning and development

Zero Broadcast: Exploring climate mitigation and decarbonisation through numeracy

Smart and Future Cities Laboratory
Faculty of Engineering, Ain Shams University

Joint collaboration with
university of the Arts London

I was a Researcher in The 24-hour internet broadcast **صفر** and podcast ZERO explores ways to count and solve climate change as a global issue. Many artistic industries use math and science as forms of reduction or violence, but counting, statistics, and measurement are more important than ever to confront our challenges. Zero discusses how calculation and computing might help solve the climate catastrophe through discourse, sound, and music.

The British Council's Egypt-UK Climate Change Funds fund the initiative.

RESEARCH GRANTS EXPERIENCE

Throughout my academic and professional journey, I have gained significant experience in crafting comprehensive research proposals:

- The "**Wellcome Discovery Research into Life, Health, and Wellbeing**" project. In collaboration with a dedicated team, I led the development and complete authorship of a proposal aimed at addressing worldwide health challenges, specifically focusing on mental health. The proposal presented an innovative concept – an Urban Living Lab for Neuro-responsive Urbanism. This sought-after initiative aimed at securing funding for research that combines urban design principles with neuroscience to enhance well-being in outdoor environments.
- I actively participated in formulating the research proposal for an **Erasmus+ project focused on the digital transformation in cultural heritage**. This involved articulating a clear vision for the project and outlining strategies to leverage digital advancements in preserving and promoting cultural heritage.
- My involvement in the ongoing research collaboration between the Science and Technology Development Fund (STDF) and the British Council is noteworthy. In this venture, our team proposed the idea of **Digital Twin Micro Credential Programs for the Built Environment towards a Net Zero future**. This innovative approach envisions utilizing digital twin technology for skill development programs, aligning with the global initiative for sustainability.
This research project has been accepted from STDF and the British council
- I contributed to the proposal development for the **Agriscape research project** provided by **STDF**. This initiative explores novel approaches in the intersection of agriculture and landscape design. The proposal emphasized sustainable practices and innovative methodologies to address challenges in modern agriculture.
- I have been actively involved in the proposal writing for the last call of **Interreg projects**, where I contributed to the development of a comprehensive proposal for the project titled **RESCUE**. This project focused on creating a Neighborhood Risk Assessment Tool specifically designed for coastal communities. The RESCUE project aimed to enhance community resilience by integrating critical risk-related and resilience indicators into existing Neighborhood Sustainability Assessment Tools (NSATs). My role involved outlining the project's objectives, methodology, and expected impacts, ensuring that the proposal effectively addressed the challenges of climate change adaptation and disaster risk prevention for vulnerable coastal zones.
- I was responsible for creating and writing the full proposal for a project titled "**Ecosavvy Campus: Igniting Sustainable Futures with Digital Twin Dynamics**" under the first call of the **Deanship of Scientific Research at the University of Business and Technology in Saudi Arabia**. This project aimed to leverage digital twin technology to enhance sustainability practices within campus environments. My responsibilities included developing the project objectives, methodology, implementation plan, and expected outcomes, ensuring a comprehensive and compelling proposal aligned with the funding criteria and sustainability goals of the university.

RESEARCH PUBLICATIONS

I am the main author of two research papers specialized in healing landscape and blue-ways systems,

1. The design attributes for a land-based experience of healing landscaped blue-way system
 - Citation: (Abd elhady, S., Abdulghany, R. (2021). Design attributes for a land-based experience of healing -landscaped blue-way system. African Journal of Biological Sciences, 17(1), 149-169. doi:10.21608/ajbs.2021.191210).
2. Design criteria of a healing blue-way water related experience using healing landscape.
 - Citation: Abd El-Hady, S., Abdulghany, R., Elattar, A. (2021). Design criteria of a healing blue-waywater related experience using healing landscape. Journal of Egyptian Academic Society for Environmental Development. D, Environmental Studies, 22(1), 47-62. doi:10.21608/jades.2021.194007

I am the main author of research paper that tackles the process of digital fabrication workshop process: Digital fabrication as an approach for innovative architecture education.

- Citation: Abdulghany, R., Youssry, M., & Elkhateeb, S. (2023). Digital fabrication as an approach for innovative architecture education. 1(4)

Main Author

1. "Analyzing Human-Environment Interactions through EEG and Virtual Reality Experiments" (**In Progress**)
2. "Integrating AI and Computational Algorithms to Optimize the 15-Minute City Model" (**In Progress**)
3. "Sound Archaeology: Reviving the Sounds of the Past of Beit Alrazzaz using VR Experimentation" (**Under Review**)
4. "Enhancing Community Resilience through Interactive Web Platforms for User-Responsive Outdoor Spaces" (**Under Review**)

WORKSHOPS

- Computational design from IAAC (institute for advanced architecture of Catalonia)
- Urban Analytics from IAAC
- Environmental Design from IAAC
- Designing resilient streetscape in arid climate using climate adaptive design
- Healing by nature and neuro-landscape design workshop
- UN-Habitat: Disaster Risk Reduction workshop
- Biophilic design strategies workshop
- Sustainable interior design workshop
- Adaptive landscape for resilient streetscaping in Cairo
- Broadcasting workshop for Zero Broadcast: Exploring climate mitigation and decarbonization through numeracy
- 3d scanning for historical buildings restoration
- Gis for climate action Mooc
- Computational design and digital Fabrication
- APSA MENA Methods Program: Quantitative Methods for the Social Sciences: Regression Analysis workshop from the American political sciences associations

PROFESSIONAL ACHIEVEMENTS

Youth for Development Initiative

- Position: Team Member
- Contributed as a member of the 5-member team representing Ain Shams University.
- Achieved a commendable third-place ranking at the policy paper level in the prestigious "Youth for Development" initiative. Our paper, titled "The Green Line: From Separation to Urban Connectivity: Designing Sustainable Urban Agriculture Parks," demonstrated our commitment to sustainable urban planning and development.

UNESCO Week of Sound in Egypt

- Positions: Organizer, Assistant Coordinator, Exhibition Designer
- Actively participated in the coordination and organization of the UNESCO Week of Sound in Egypt, hosted within the Faculty of Engineering.
- Designed and curated the on-margin exposition for the event, contributing to its overall success in promoting sound-related awareness and education

University Complex in New Capital Competition

- Position: Design Team Member
- Played an integral role as a member of the design team tasked with conceptualizing the University Complex in New Capital.
- The team's efforts resulted in a commendable fourth-place finish in this highly competitive competition, showcasing our dedication to innovative architectural design and urban planning

ARAB REPUBLIC OF EGYPT



AIN SHAMS UNIVERSITY

Certificate

30709



The Faculty of Engineering, Ain Shams University certifies that:
RANEEM ALAA ABDELGHANI IBRAHIM ANWAR

Student Code: 13P7043

Born in: Cairo

National ID: 29603150101122

Nationality: Egyptian

Has been awarded the Bachelor of Science in Architecture Engineering

Program: Landscape Architecture

Graduated in: June 2018

Cumulative GPA: 3.47 out of 4.0

Project GPA: 3.85 out of 4.0

The duration of study is minimum 9 semesters and the study language is English.

Faculty Approval Date: 25/7/2018, University Approval Date: 16/8/2018.

Issued Via

Registrar

DEAN

Issued at: 22/11/2023



Order No.: 121034



CAIRO UNIVERSITY

Certificate

006043



This is to certify that Engineer: **RANEEM ALAA ABDELGHANI IBRAHIM** has been granted the Master's degree in (2022)

Engineer Full Name: **RANEEM ALAA ABDELGHANI IBRAHIM**

Date of birth: **15/3/1996**

Place of birth: **Cairo**

Nationality: **Egyptian**

National ID: **29603150100122**

Department: **Urban Design**

Specialization: **Urban Design**

Thesis title:

Healing Landscape as a Tool for Designing a Blue – Way System .

The council of the faculty approved it on: **16/1/2022**

The university's president approved it on: **31/1/2022** by delegation

This certificate is issued upon the student's request

Officer

Yousfa

Head of postgraduate dept.

Ashraf

Dean



Date: **4/9/2023**

