

Elnaz Ghasemi

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Education

- 2023- **Ph.D in Architecture**, *Penn State University, US*
- 2022- **M.Sc in Architectural Engineering(CM,Concurrent Master)**, *Penn State University, US*
- 2017-19 **Master of Architectural engineering**, *Tarbiat Modares University, Tehran, Iran (GPA 3.5)*
- 2012-16 **Bachelor of Architecture**, *University of Kurdistan, Sanandaj, Iran, (GPA 3.4)*

Experience

- 2023- **Research Assistant**, *Department of Architecture, PennState University, State College*
Conducting a study on **urban carbon neutrality**, and **energy use** in buildings employing simulation and data-driven methods.
 - Investigating bottom-up simulation approaches to analyze both operational and embodied carbon emissions in the building sector.
 - Funded by the Department of Energy (DOE).
- 2023 **Research Assistant**, *Department of Engineering, PennState University, State College*
Conducted a study on using origami patterns to design **aerodynamic envelopes** in tall buildings.
 - Investigated the efficient design of **kinetic origami** facades in tall buildings to reduce wind pressure caused by natural hazards.
- 2023 **Research Assistant**, *Department of Engineering, PennState University, State College*
Conducted a literature review on barriers to **high-performance building** development in the global south.
 - Funded by Farzaneh Family Foundation.
- 2023 **Teaching Assistant**, *Department of Engineering, Penn State University, State College*
 - Engineering Design 100 learning assistant at the School of Engineering Design and Innovation.
- 2022 **Renovation**, Iran(Freelance Project)
 - Designed and implemented the interior of a 90m2 clothing store aiming to improve product visibility and ease of navigation.
- 2017-21 **Facade, and Interior Design**, Iran(Freelance Project)
 - Desigend the facade and interior of a 5-floor residential apartment, considering the low-carbon local materials in the area.

Technical Skills

Arch Autocad, Revit, Autodesk 3Dmax, SketchUp, V-ray, Rhino, Grasshopper, Energy Plus, UMI, Ecotect.
Graph Adobe Photoshop, Adobe InDesign, Adobe Illustrator.
Prog Python, Pandas, Scikit learn, Object Detection, Computer Vision.

Awards

- 2023 Recipient of **James E. Marley graduate fellowship** in engineering, issued by College of Engineering Pennsylvania State University.
- 2019 Recipient of German Government's **DAAD** Study Trip scholarship on the Topic of: Integrated Approaches to Modern Industrial Heritage Buildings

Training and Certifications

- 2023 (Online) Data analysis, and visualization certificate, DataCamp
- 2022 (Online) IBM Data Science professional certificate, Coursera
- 2017 (Online) Autodesk Building Performance Analysis certificate, Autodesk