



# Nariman Rafati

Daylight and Energy Analyst

## SUMMARY

A value-driven and enthusiastic, passionate Environmental and Sustainable Architect, with an interest in energy efficiency, daylighting and building envelope analysis with acquiring good knowledge among them. Aware of current global sustainability concerns like passive housing, health & safety, post-occupancy of a building with a Master's degree focused in Energy-efficient and Environmental Building Design from Iran University of Science and Technology. Nariman is advancing parametric modeling and optimization workflows in terms of energy and daylight to analyze and visualize building design decisions during the early design stages and its process. Specifically, spearheaded the use of Ladybug and Honeybee for Grasshopper/Rhino, performing daylight analysis, glare analysis, building performance simulation, envelope heat modeling, and energy modeling for various projects due to his literature review over source book in daylighting systems, components and their standards and publications.

## WORK EXPERIENCES

### Designer & Environmental Analyst of BeraNia office

sep 2018 - mar 2020

BeraNia Office had different types of projects from interior to the urban scale and I worked on various projects like industrial, commercial, and residential buildings. My work was focused on sustainable strategies and computational design to improve the performance of facades, buildings, and urban districts.

Environmental data analysis is one of the basic steps of every project that I had done like climate data analysis in the first design stage, daylight calculations, energy consumption, and thermal comfort assessments during the design process. At the end, we proposed sustainable design on any scale using different strategies like TOD (Transit Oriented Development) and innovative sustainable urban furniture using renewable energy on large scales and comparing various local design types according to daylight and energy in small ones.

### Energy & Daylight Analyst of Kouman Studio

jun 2020 - nov 2020

My work at Kouman Studio was simulating several village projects within Roudehen city, before and after the development. I modeled a variety of passive designs for optimal heating and cooling performance of the buildings in Ladybug Tools software hence my numerical simulation approach is complemented by a collaborative approach to team integration and this integrated approach combines design and simulation in a single workflow where automated performance assessment of daylighting, building energy, and thermal comfort, is used to inform design decisions.

Through insight of Grasshopper scripting, I participated in the development and/or improvement of environmental analysis such as outdoor solar radiation for better building placement and orientation of villages, examining material and their properties, selection proper window to wall ratio according to superlative performing indoor daylight, glare and energy balance.

## EDUCATION

### B.Sc of Architecture at Shahid Chamran University of Ahvaz

sep 2013 - may 2017

### M.Sc of Sustainable Architecture at Iran University of Science and Technology

feb 2018 - sep 2021

## PERSONAL INFO

Name

Nariman Rafati

Nationality

Iran

Date of birth

21/april/1995

Marital status

Single

Current location

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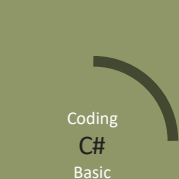
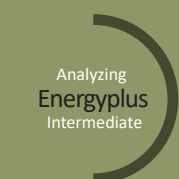
Skype

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## PROFICIENCY



## LANGUAGES



## DISSERTATIONS

### B.Sc: Design of Cultural Space and Art Musuem for Parviz Tanavoli

This thesis focused on designing a museum that has an educational part to teach sculpturing inside according to the well-known Iranian sculpturist method, Parviz Tanavoli.

### M.Sc: Design of School for Daylight and Energy Optimization Based on Louver Function

This research not only proposed a workflow to optimize building louvers by considering the most promising influential factors but also proposed design alternatives in understudied climate zones which is three different cities in Iran. These alternatives will be proposed by categorizing the results from Pareto Front chart. It will come up with specific louver features which compatible with a specific climate. These design alternatives assessed by energy performance and visual comfort in those climates.

## PUBLICATIONS

### Regenerative Development and Design, A Framework for Evolving Sustainability

in cooperation with [Mohammad Ali Khan Mohammadi](#), [Hoda Homayouni](#). oct 2019

Processing to publish in Shahid Beheshti University

### Investigation The Effect of Khavouchini on Heat Transfer from Southern Facade

in cooperation with [Ali Dahar](#), [Mansoureh Tahbaz](#), [Mohsen Taban](#). sep 2020

Published in Journal of Architecture in hot and dry climate, Volume 7, Issue 10

### Comparison of different louver configurations for daylight and energy optimization in Bandar Abbas and Tabriz

in cooperation with [Haniyeh Sanaieian](#), [Mohsen Faizi](#). march 2022

Published in Journal of Honar-Ha-Ye-Ziba: Memary Va Shahrsazi, Volume 26, Issue 3

### Investigating the effect of placement and dimensions of the south fenestration on the amount of natural light and cooling and heating load in Arak city

in cooperation with [Ehsan Khezerloo-Ye Aghdam](#). sep 2022

Published in The 9th National Conference on Modern Studies and Research in Architecture

### Investigation of visual privacy and daylight with the use of venetian blinds in Tehran

in cooperation with [Ehsan Khezerloo-Ye Aghdam](#). sep 2022

Published in The 9th National Conference on Modern Studies and Research in Architecture

### Optimizing building density in TOD zones in Tehran with the approach of reducing cooling and heating energy consumption; Case example Sohrevardi metro station zone

in cooperation with [Ehsan Khezerloo-Ye Aghdam](#). sep 2022

Published in The 9th National Conference on Modern Studies and Research in Architecture

### Designing an active solar system in order to supply the primary energy for the building's electrical equipment, case study Sam Center Tehran shopping center

in cooperation with [Negin Tofighi](#). oct 2022

not Publish yet

## ACHIEVMENTS & CERTIFICATES

### Short Listed for Designing Hustle Hub in Moscow held by UNI.XYZ

jul 2019

### Second Place of Austria Square held by Tehran City Hall District 22

feb 2020

### Zero Energy Building Design held by Delft University

may 2020

## TEACHING BACKGROUND

### Energy Efficient Course held by Arj School

feb 2019

### Climate Compatible Architecture Seminar at Shahid Chamran University

april 2022

### Regenerative Architecture workshop held by Digital Futures

june 2022