



PROFILE

An Architect from Tehran University of Art in the field of Energy and Environment. I'm working on new technology like AR/VR, AI, and Data Analysis in Architect.

CONTACT

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HOBBIES

Game Programming
Creating educational content

HAMED SANGIN

Building Performance Expert

EDUCATION

M.Sc. Architecture and Energy
2021 – Tehran University of Art

B.Sc. Civil Engineering
2016 – Islamic Azad University of Mashhad

WORK EXPERIENCE

Irsa Tadbir Modern - Developer AR application (Intern)
2019 – now
Collaborated with BMS team to work on developing AR app

UpGreenGrade - Program Development
2020–now
developing user-friendly cloud platform (Building performance/environmental) analysis by using Honeybee/Ladybug Plugin

UpGreenGrade - Building Performance Simulation (BPS) tools instructor
2020–now
Learning contents:
Butterfly Plug-in (A CFD simulation tools for Building)
Dragonfly Plug-in (Urban Heat Island Simulator)
A comprehensive learning course for Acoustic Performance Simulation
A comprehensive Optimization course for Building Performance Simulation

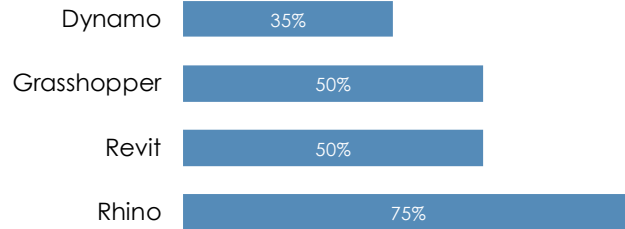
Mehraz 8 - Revit instructor
2017
Learning Revit architecture and Insight360

Bazar Melal Co. - Intern
2014 – 2016
Work in Technical office engineering administrator

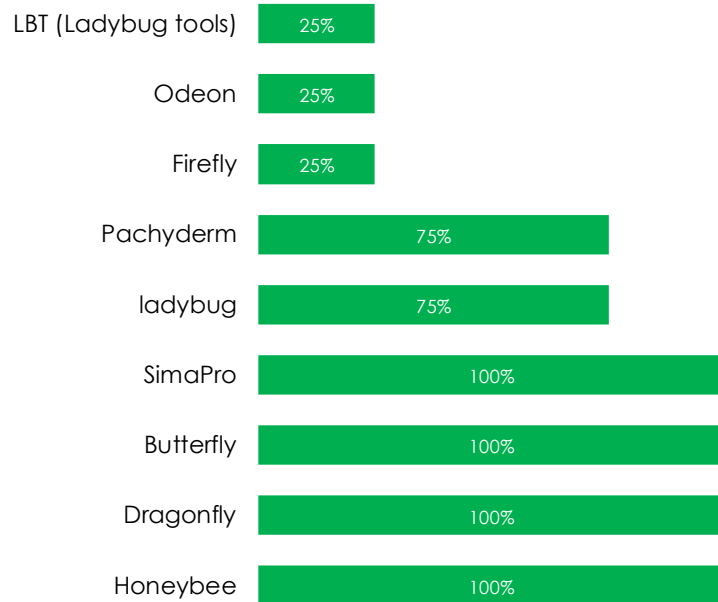
secretary of the (college) students' scientific association
2012-2015

SKILLS

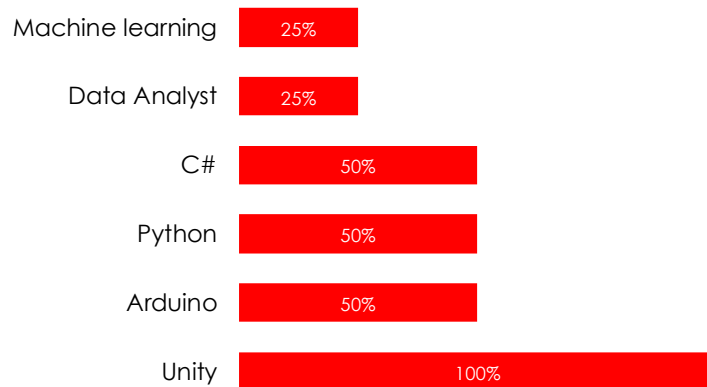
ARCHITECTURE



BUILDING PERFORMANCE SIMULATION



COMPUTER SOFTWARE DEVELOPMENT



PROJECT WORK

University research project - the Rajae University of Art (for Engineering organization of Qom)

2020-now

Determining the optimal thickness of thermal insulation in the exterior walls of residential buildings in Qom

University research project - Tehran University of Art

2019 – 2020

Creating tool (application) to guide and encourage users to reduce energy consumption and carbon dioxide emissions in the building using augmented reality.

Solar Decathlon 2019 competition - U.S. Department of Energy

2018 – 2019

Design Zero-energy House

Solar Decathlon 2021 competition - U.S. Department of Energy

2020

Mentor

PAPER

Published Paper accepted as Oral Presentation by the committee in the 6th International Conference on Solar Energy (ICESE 2018) 2018
"Potential of Saving Electricity Energy in Common Housing by Photovoltaic Panels in Mashhad with Ladybug"

Published Paper accepted as Oral Presentation by the committee in the 6th International Conference on Solar Energy (ICESE 2018) 2018
"Analysis of roof-mounted photovoltaic systems with Honeybee a plug-in for grasshopper"

Published Paper accepted as Oral Presentation by the committee in First International Conference on Energy Management in Building and Related Technologies 2018
"Potential of Saving Electricity Energy in Common Housing by Photovoltaic Panels in Mashhad with Ladybug"

Published Paper accepted in energy and building journal 2021
"Energy Performance of Building Integrated Photovoltaic high-rise building: case study, Tehran, Iran"

Published Paper the paper was sent to Journal of Solar Energy Research (JSER) journal 2021
"Designing and Determining the optimal thickness of thermal insulation for traditional houses in Masuleh and Uramantakht"

Accepted Paper accepted in Building Engineering journal 2021
"Multi-objective optimization of building-integrated microalgae photobioreactors for energy and daylighting performance"

Accepted Paper accepted 7th International Conference on New Research in Civil Engineering, Architecture, Urban Management and Environment 2021
"The Orientation of Village, the Most Important Factor in Rural Sustainability (Case study: Masuleh and Uramantakht)"

Under review Paper the paper was sent to Building Engineering journal
2021
"A kinetic façade design for improving daylight and ventilation"

Under review Paper the paper was sent to Building Simulation journal
2021
"The effect of Atrium design on thermal comfort of a 5-star hotel: case study, Milad tower phase 2 design, Tehran- Iran"

Unpublished Paper supervision of Dr. Saeed Banihashemi and Dr. Amir Tabadkani at ACIM (Advanced Construction and Infrastructure Manufacturing) International research group
"Potentials and applications of parametric-based tools in construction waste management: A review"

Unpublished Paper supervision of Dr. Saeed Banihashemi and Dr. Amir Tabadkani at ACIM (Advanced Construction and Infrastructure Manufacturing) International research group
"Modular-based waste management and energy optimization: A parametric study"

Unpublished Paper
"How can virtual reality help architecture to design zero-energy buildings"

Unpublished Paper
"Optimization of WWR in four main climates in Iran- considering lighting, thermal comfort and ventilation"

Unpublished Paper
"Using augmented reality to reduce energy consumption in building"

Unpublished Paper
"A comprehensive evaluation electricity production and time of carbon and energy and cash payback of PV system for common housing in Mashhad"

CERTIFICATION

Unity Introduction to XR: VR, AR, and MR Foundations	02/2021
University of Colorado C# Programming and Unity	10/2020
IBM Applied AI with Deep Learning	02/2019
The National University of Singapore Data Science for Construction, Architecture and Engineering	05/2020
Delft University of Technology Zero-Energy Design: an approach to make your building sustainable	05/2020
Delft University of Technology Energy Supply Systems for Buildings	12/2020
Delft University of Technology Comfort and Health in Buildings	06/2021

U.S. Department of Energy Solar Decathlon Building Science Course	02/2019
The Hong Kong University of Science and Technology Introduction to Indoor Air Quality	02/2019
University of Illinois at Urbana-Champaign Introduction to Sustainability	04/2020
RDH Building Science Inc. Prefabricated Construction	02/2019
RDH Building Science Inc. Glazing and Building Performance	02/2019
RDH Building Science Inc. Large Building Airtightness	02/2019