MELTEM SAHIN OZKOC

+1 878 834 9630 | msahinoz@andrew.cmu.edu | www.meltemsahin.rocks | linkedin.com/in/sahinsmeltem

EDUCATION

Carnegie Mellon University | Master of Science, Building Performance & Diagnostics (MSBPD)   **08/2024 - 05/2026**
The Fulbright Scholar, CMU SoA Merit Scholar   *Pittsburgh, US*
- *Relevant coursework*: Building Performance Modeling, Geospatial Data Analytics in Infrastructure Planning, Daylight Simulation and VR, LEED: Green Design & Building Ratings, Environmental Systems: Climate & Energy in Buildings, HVAC & Power Supply for Low-Carbon Buildings, Autonomous Sustainable Buildings, Resilient & Sustainable Communities, Sustainability, Health & ProductivitySituating Research, Fundamentals of Programming and Computer Science

Technical University of Munich | Master of Science, Information Technologies for the Built Environment   **08/2023 - 08/2024**
TEV-DAAD Scholar, Completed one year of study   *Munich, Germany*
- *Relevant coursework*: Geo Sensor Networks & IoT, Professional Software Engineering, Computational Design, GIS, BIM.Fundamentals, Photogrammetry & Remote Sensing, Architectural Design Thinking (@TUM Venture Labs), Project Management, Climate Responsive Building, Renewable Energy Supply in Buildings

Middle East Technical University | Bachelor of Architecture, Salutatorian (2nd) - CGPA: 3.89/4.00   **08/2018 - 06/2023**
OMIM & The Architect Kerem Türker Foundation Merit Scholar   *Ankara, Turkiye*
- *Relevant coursework*: Architectural Engineering, Digital Media in Architecture, Building Materials Technologies, Building Construction Techniques, Building Detail Modelling, Environmental & Building Systems, Interdisciplinary Problem Solving (METU Design Factory), Structural Design

WORK EXPERIENCE

Center for Building Performance & Diagnostics - CMU | Graduate Research Assistant   **09/2024 - Present**
Pittsburgh, US
- Assisted Prof. Azadeh Sawyer and Prof. Vivian Loftness on a DOE-funded real-scale energy retrofitting and community solar project.
- Created 3D urban model with ArcGIS, using LiDAR point cloud and high-resolution drone photo matching.
- Conducted solar roof analysis using Google Solar API, NREL PVWatts, and ArcGIS Raster Solar Radiation.
- Analyzed the urban and building energy data with Python via Allegheny County API and processed it with ArcGIS.
- Designed surveys with Qualtrics to support energy inspection. Prepared the report and presentation templates for the DOE grant proposal with Adobe InDesign.

Arcelik Global Inc. | R&D Project Assistant   **06/2022 - 11/2022**
Istanbul, Turkiye
- Spearheaded an interdisciplinary project on smart-home energy management at Arçelik, globally recognized as Turkiye's most sustainable home appliances company, ranked 34th in Corporate Knights' 2021 Global 100 Index.
- Worked with a team of engineers, business managers, and designers.
- Developed user scenarios and energy dashboards for smart consumer electronics using Figma. Agile management in design development, feasibility, and product licensing phases with Atlassian Jira.

slasharchitects | Architectural Intern   **02/2022 - 03/2022**
Istanbul, Turkiye
- Created parametric design options with Rhino and Grasshopper at the award-winning firm slasharchitects, recipient of the 2017 World Architecture Festival Award and a finalist for the Aga Khan Award for Architecture.
- Designed the office catalog with Adobe InDesign. Curated the selected projects of the office for the Arkitera Architecture Yearbook selection.

Design Factory Global | Interdisciplinary Project Member   **10/2021 - 10/2022**
Ankara, Turkiye
- Developed smart-home assistant design solutions with an interdisciplinary team of engineers, designers, and business managers.
- Designed an intelligent home scenario, proposing decentralizing the home network with edge computing and IoT and introducing "latent learning" as a system that learns from user behavior and syncs the smart home to ensure a comfortable home experience.
- Proposed the "assistant-home" approach instead of a "home-assistant" to redefine smart homes. Worked closely with the Arcelik Global Inc. company engineers and managers.

Folkart Inc. | Construction Management Intern   **08/2021 - 09/2021**
Izmir, Turkiye
- Monitored the 223,000 sqft high-rise construction site Folkart Vega by TAGO Architects, consisting of 4 blocks with 843 residential and 53 commercial units. Tracked the production line, guided the subcontractors, and prepared daily reports and spreadsheets with Microsoft Excel.
- Folkart is the leader in urban transformation in Türkiye and is renowned for constructing some of Europe's tallest twin towers.

SKILLS

3D Modelling & GIS: *Rhino* (+Grasshopper), SketchUp, AutoCAD ; ArcGIS Pro
Building Information Modeling (BIM): Autodesk Revit, Solibri
Visualization: Lumion, Enscape, Vray; *Adobe Suite* (*Photoshop, Illustrator,* InDesign), Figma, Miro
Programming: Python (+Pandas, Numpy, Matplotlib), C#/.NET, C++ (Arduino IDE)
Energy modeling & Sustainable Design: Climate Studio, Climate Consultant, Ladybug Tools, DesignBuilder, RemRATE
Miscellaneous: Hand drafting/modeling, CNC, 3D printing, Microsoft 365 (Word, Excel, PowerPoint, Teams), Google Workspace
Languages: Turkish**:** Native, English**:** Advanced (C1-C2), German**:** Intermediate (A2-B1)

COMPETITIONS, HONORS & AWARDS

ASHRAE 2025 Design Competition Participant	2025 (Ongoing)
The Fulbright Scholarship 2023 U.S. Master's Grant, Principal candidate, Full grant for 2 years	2024 - 2026
AA (Architectural Association) Visiting School 100% Full scholarship, Active participant	2022
TSMD (Turkish Association of Architects in Private Practice) Basamaklar'21 Exhibition, Work featured	2021
Aegean Exporters' Associations (EIB) Ezberbozan Design Contest, Finalist	2021

PROJECTS *(See more at meltemsahin.rocks/works)*

- **"Blue Print Green Design"**: Developed a Python app to create energy-efficient and sustainable design layouts, calculate the Site EUI, and visualize the building heat loss. - Link
- **Energy Modeling and Retrofitting**: Completed a professional report on energy modeling and heat loss calculations with RemRATE for a residential unit in Germany. - Link