

Esmail Mottaghi

COMPUTATIONAL DESIGNER

[Portfolio Website](#)

Vancouver, BC, Canada

mottaghi.esmaeil@gmail.com

Professional Summary

With over 10 years of experience in computational design, design automation, and digital fabrication, I specialize in developing innovative digital solutions to optimize design workflows. I am proficient in integrating generative design, performance prediction, and analytics interfaces to enhance decision-making processes. Additionally, I am the developer of [Parakeet](#) and several Grasshopper plugins, streamlining the design-to-fabrication pipeline.

Experience

Perkins&Will / MITACS - Computational Designer 2023 - 2024

- Developed tools integrating AI-based performance assessment models with generative design for data-driven decision-making.
- Programmed solutions using C#, Python, Ladybug, Honeybee, and Autodesk SDKs.
- Conducted UX research (interviews, surveys, usability testing) to inform design decisions and improve user experience.
- Designed interactive dashboards and visualizations using UX/UI principles for performance prediction in healthcare-related projects.

FiBREX construction group.co (uae) - Computational Designer 2022 - present

- Automated large-scale GFRC panel fabrication using Grasshopper and C#.
- Collaborated with multidisciplinary teams to ensure precision in architectural, structural, and MEP designs.

Paragen - Grasshopper Developer 2014 - 2021

- Automated large-scale GFRC panel fabrication using Grasshopper and C#.
- Collaborated with multidisciplinary teams to ensure precision in architectural, structural, and MEP designs.
- Developed a grasshopper plugin for the fabrication of metal facade for ArcMetal company.
- Developed a grasshopper plugin for creating cabinet components for KIACAM company.

Abad Tadbir Co- Architectural Designer 2021 - 2023

Education

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| • Simon Fraser University, MSc in Interactive Arts and Technology (HCI) | 2023 - 2024 |
| • University of Tehran, MSc in Architectural Technology (CAD) | 2013 - 2016 |
| • Shahid Chamran University of Ahvaz, BArc | 2008 – 2013 |

Skills & abilities

- Product Design: Wireframing, prototyping, user-centered design principles.
- Programming: C#, JavaScript, P5.js, Three.js, CSS, HTML.
- Design Software: Rhino, Grasshopper, AutoCAD, Karamba, ladybug, honebee.
- UX/UI Design: Figma, Webflow, Agile methodologies, user research, usability testing.

Publication - [google scholar](#)

- Mottaghi, E., Abuzurairq, A. M., & Erhan, H. (2024). D-Predict: Integrating generative design and surrogate modeling with design analytics. CAADRIA 2024, Singapore.
- Mottaghi, E., Erhan, H., Abuzurairq, A., Okhoya, V., Ampanavos, S., Bernal, M., Chen, C., & Madkour, Y. (2024). Integrating Surrogate Modeling and Design Analytics for Data-informed Exploration in the Early Phases of Building Design. eCAADe 2024, Nicosia, Cyprus.