# RODRIGO ALBERTO GALLARDO

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Rodrigo is a graduate student and researcher at MIT working at the intersection of human-computer interaction, design, and data. He focuses on building interactive systems that enhance usability, ergonomics, and real-world performance.

## EDUCATION

**Massachusetts Institute of Technology**

-Master's of Science in Design Computation + Master's in Electrical Engineering & Computer Science

(Expected 2026 Dual degree Candidate)

**University of Houston**

-Bachelor of Architecture, Honors Thesis

## WORK + RESEARCH

***Rice MAHI Lab – Visiting Researcher Mech E Dept.*** (June 2025 – PRESENT)

• Conducting XR user studies using a haptic bracelet to evaluate spatial perception.

***MIT AeroAstro – Lead VR Developer, Queueing Theory Learning Project*** (Aug 2025 – PRESENT)

• Designing interactive scenarios to demonstrate performance trade-offs, system failures, and management interventions (e.g., staffing strategies, service rate adjustments)

***MIT LEAP Group – Contributor, Mechanical Engineering Dept.*** (Feb 2025 – June 2025)

• Analyzed video data for published research and created visual content for the journal.

***Skate Ecosystems – Computational Designer*** *(Jan 2025 – PRESENT)*

• Designed skate layouts based on skater motion and informal feedback loops.
• Modeled skate features to improve user rhythm, repetition, and safe transitions.

***MIT - Research in Computational Fabrication + AR***

• Built AR tools for fabrication tasks; current work includes planning user testing sessions.
• Explored AI-based systems to improve interaction, adaptability, and task sequencing.

***University of Houston CoAD - Augmented Reality 3D Printing Research***

• Studied AR workflows for construction guidance, focusing on clarity and efficiency.
• Used geometry tools to refine prints and streamline digital-to-physical processes.

***CougAR Lab – VR Environments Learning Lab***

• Designed VR environments and workflows intended for future user testing phases.
• Created interactive spaces to support layout studies and immersive learning tools.

***Protolab Architects – Computational Designer*** *(Aug 2023 – Aug 2024)*

• Led scripting-based workflows for creative form generation and geometry studies.
• Modeled spatial and product-scale designs focused on pattern and modularity.
• Created fabrication-ready digital models for CNC, prototyping, and testing setups.

***Collaborate Architects – Designer VR Specialist*** *(Jan 2023 – Aug 2023)*

• Created VR walkthroughs and adjusted scenes based on stakeholder reactions.

***Prothird – UX + Media Production Specialist*** *(May 2022 – Sep 2022)*

• Worked with clients to define site goals and ran A/B tests on content and flow.
• Built wireframes and layouts for responsive sites, based on real user feedback.

***Precursor Technologies LLC – Design Intern*** *(May 2020 – Aug 2020)*

• Built lunar habitat concepts and mapped out basic task flows and use scenarios.

## NOTABLE COURSES

Computational Structural Optimization| Creative Machine Learning | Towards AI and fabrication | Shape Grammars | Geometric Folding Algorithms

## SKILLS + SOFTWARE

**User-Centered Design + Human Factors**
Grasshopper, Rhino 8, Blender
Generative Design + Algorithmic Modeling
Computational Geometry + Topology Optimization
**Programming (Python, C#) + Data Analysis**
Python (NumPy)
C# (for Rhino + Unity development)
ML for Design Applications

**AR/VR Development + Interface Prototyping**
Finite Element Analysis (FEA) + Structural Simulations, Karamba
AR/VR Development (HoloLens, Unity, Unreal Engine)
Robotics + CNC (KUKA, Arduino)
AI Body Motion Analysis (Media Pipe)

## PROJECTS + EXHIBITIONS

- Kinematics of Urban Movement– ArCH Center Houston *(2026)*
- VR Aero Astro Teaching Module– Aero Astro Department MIT *(2025)*
- Publication as Worldmaking– MIT ACT Gallery *(2024)*
- Kiosk K67: System for Urban Imagination– Blaffer Art Museum *(2023)*

## AWARDS + HONORS

**Steve Jobs Archive Fellow 2025-2026**
Selected for a yearlong fellowship supporting young creators working with technology and creativity; awarded stipend, individualized mentorship, and national peer community
**John Haymaker Fellow 2024-2025**
Awarded to MIT graduate students excelling in computational design, honoring John Haymaker's legacy

**CSEF Scholarship 2024, 2025**
Awarded to student skateboarders pursuing higher education through CSEF
**Latinos In Architecture Scholarship 2022**
Awarded by AIA Houston and the Latinos in Architecture Committee supporting academic and professional growth in architecture.

## TEACHING + OUTREACH

MIT TA – Publication as Worldmaking Course *(2024)*
University of Houston – Instructional Assistant for Design Courses *(2021–2023)*
MIT AMP – Graduate Mentor for Underrepresented Students *(2024)*
HISD ATM – Ascending to Men *(2024)*

## LANGUAGES

Spanish (Fluent)