

Madeline Benitez

Biomedical Engineer – Ergonomics & Product Design

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SUMMARY

Passionate Biomedical Engineer with a Master's degree in Biomedical Engineering, focusing on ergonomics and product design. Experience developing user-centered products through innovative design. Skilled at using CAD tools, particularly CATIA V5, to create physical components that enhance human interaction. Dedicated team player with the capacity to collaborate effectively across disciplines, fostering a culture of inclusivity and innovation. Objective is to apply knowledge of human factors and technology to deliver solutions that prioritize usability and comfort, ensuring products are both functional and appealing.

EDUCATION

Master's Degree in Biomedical Engineering

University of Illinois at Chicago 🎓 GPA: 3.9 📅 2025 📍 Chicago, IL

Coursework: Biomechanics, Human Factors, Product Design, Ergonomics

Bachelor's Degree in Biomedical Engineering

University of Illinois at Chicago 🎓 GPA: 3.8 📅 2023 📍 Chicago, IL

Coursework: Engineering Principles, Materials Science, Statistical Methods, Mechanics

TECHNICAL SKILLS

- **3D Modeling Tools:** CATIA V5, SolidWorks, Autodesk Inventor
- **Analysis Software:** MATLAB, SIMULIA Abaqus, ANSYS
- **Research Tools:** Mendeley, Zotero, EndNote
- **Design Standards:** ISO 9241, ANSI/HFS 200, ASTM F2176
- **Simulation Tools:** OkayFitts, AnyBody Modeling System, FEA Tools
- **Documentation Software:** LaTeX, Microsoft Office, Google Suite
- **Usability Testing Methods:** Surveys, Focus Groups, A/B Testing
- **Collaboration Platforms:** Slack, Trello, Asana
- **Prototyping Frameworks:** Agile, Design Thinking, Lean
- **Energy Evaluation Standards:** LEED, BREEAM, Green Globes

SKILLS

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|--------------------------------|-----------------------------------|-----------------------------|-------------------------------|
| • 3D CAD Modeling (CATIA V5) | • Multidisciplinary Collaboration | • Biomechanics Fundamentals | • Quality Assurance Processes |
| • Ergonomics and Human Factors | • Data Analysis | • Human-Centered Design | • Software Proficiency |
| • Usability Testing | • Prototyping Techniques | • Analytical Thinking | • Communication Skills |
| • Technical Documentation | • User Interaction Studies | • Project Management | • Research Methodologies |

EXPERIENCE

Biomedical Engineering Design Intern

University Project 📅 September 2025 - Present 📍 Chicago, IL

Focused on designing ergonomic interfaces for medical devices. Applies leading methodologies in CAD modeling, using CATIA V5 for rigorous accuracy. Collaborates closely within a multidisciplinary team environment, ensuring alignment on objectives across engineering and design functions.

- Led the design of ergonomic interfaces for medical devices using CATIA V5, enhancing user accessibility.
- Collected and analyzed anthropometric data through user research, shaping design decisions around actual user needs.
- Tested design prototypes via usability assessments, iteratively refining them based on direct user feedback and industry standards.
- Worked alongside peers to conduct comprehensive ergonomic assessments, maintaining high compliance levels.
- Created detailed technical documentation supporting design choices and project workflows, aiding clarity and understanding.
- Presented findings and recommendations to faculty, recognized for an innovative approach and thorough analysis.

Research Assistant

Academic Research 📅 January 2025 - August 2025 📍 Chicago, IL

Contributed significantly to research activities focused on biomechanics and human factors impacting product design. Worked collaboratively to push boundaries in ergonomic simulation technologies enhancing user experience strategy.

- Supported biomechanical research, contributing valuable data collection and analysis for ongoing projects.
- Collaborated on exploration of ergonomic simulation tools, increasing understanding of their impact on user interaction.
- Assisted in writing research papers, emphasizing methodologies aimed at enhancing academic discourse.
- Conducted literature reviews, synthesizing information pertinent to ergonomics for impactful discussions.
- Participated actively in weekly meetings, offering insights into progress and strategic planning for future studies.
- Coordinated a research symposium, facilitating engagement and knowledge sharing among academics.

LEADERSHIP & AWARDS

- Dean's List - University of Illinois at Chicago, 2024
- Best Presentation Award - Biomedical Engineering Symposium, 2025

CERTIFICATIONS

- Certified in 3D CAD Modeling (CATIA V5) 📅 2025
- First Aid Certification 📅 2024

PROFESSIONAL AFFILIATIONS

- Member, Biomedical Engineering Society, 2024 – Present
- Volunteer, Engineering Outreach Program, 2023 – Present

LANGUAGES

- English (Native)
- Spanish (Intermediate)

ADDITIONAL INFORMATION

Work Status : Authorized to work in United States. No sponsorship required.

REFERENCES

AVAILABLE ON REQUEST