**Ryan Harrison Beckett**

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**Education**

**Tufts University,** Medford, MA **Fall 2021 - Present**

M.S., Human Factors Engineering

Assistive Technology Certificate

**Lehigh University,** Bethlehem, PA **May 2019**

B.S. with Honors, Integrated Degree in Engineering, Arts and Sciences (IDEAS honors program)

Concentrations: Mechanical Engineering and Philosophy

Thesis: The backstory of design beyond the engineering experience: The philosophy of creativity and creation

Major Project: Wooden Wing Design

**Engineering Projects**

**Adaptive Gaming Mobile Slant Board**,*Analytical Methods Semester-long Project*  **Spring 2023**

* Designed an adaptable slant board device specifically to make adaptive gaming on the go more feasible
* Performed user research, created an initial prototype, performed a task and risk analysis on the prototype, adjusted our prototype accordingly, and conducted a usability test for our final prototype

**Universally Adjustable Wheelchair Vocational Tray**, *Assistive Technology Semester-long Project* **Fall 2022**

* Prototyped, refined, and constructed a final product that applies universal design principles of assistive technology
* Worked in tandem with our client to perform user research and feedback

**Accessible Baby Stroller**, *Semester-long Accessibility Design Project* **Spring 2022**

* Performed user research with our client
* Analyzed research to bridge the designer-user gap and to establish user needs and the hierarchy of needs
* Designed and prototyped potential stroller models
* Incorporated the user feedback loop in product development

**VibeGuide**, *Human Machine System Design Final Project* **Fall 2021**

* Conceptual machine-learning and signal-detection-capable upper-body and toe-tip cameras that trigger waist and ankle pad vibrations to enable visually impaired persons to walk around and have use of both hands
* Prepared comprehensive report with user profiles, task analyses, and device limitation observations

**Hill Climbing Walking Stick Attachment**, *Solo Independent Project* **Summer 2020-Summer 2021**

* Concept: Low-cost, easy-to-use walking stick attachment for people with muscle anomalies
* Possibly a 3-D printable SolidWorks design
* Consulted with Children’s Hospital Colorado neuromuscular department doctors on my prototype

**Skills**

**Human Factors Skills**: User Research, Task Analysis, User Profiles, User Flow Charts, Use Environment, Signal Detection Theory, GPS/GIS

**Analytical Methods**: Gap, Known Problem, Risk, Risk Mitigation, Root Cause, Residual Risk

**Engineering Skills**: Microsoft Excel, R Studio, SolidWorks, Finite Element Analysis, MATLAB

**Professional Experience**

**It’s Your Move**, *Retail Associate* **Winter 2019-Summer 2021**

* Assisted customers, processed sales, and restocked inventory at this board game, puzzle, and novelty toy store

**Geotech Environmental Equipment, Inc.**, *Engineering Intern* **Summer 2018**

* Assisted in the design and analysis of SolidWorks drawings and a drone project

**Activities**

**Human Factors and Ergonomics Society**  **Summer 2020-Present**

**Interests**: Mallet percussion and cymbals, Tabletop games, Metroidvania and action-adventure video games, Travel, Exploring nature