Faith E Jones

Engineering Design Portfolio

Introduction

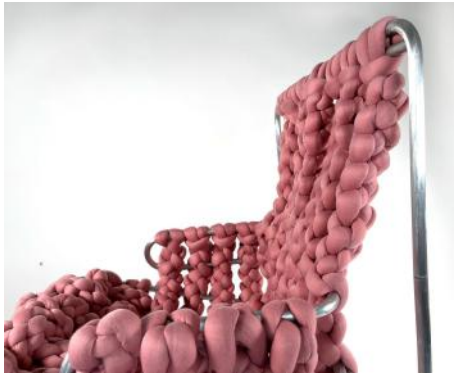
Hello, my name is Faith Jones!

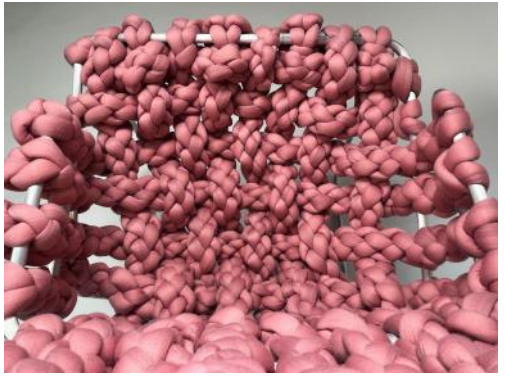
I am a recent graduate. I studied Mechanical Engineering with a concentration in Industrial Design at MIT.

I am interested in product development, but in particular I have a love for thoughtful and playful design.

ReWoven Chair Spring 2022

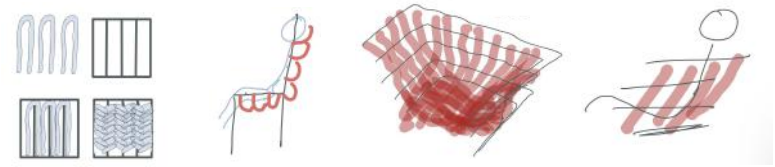
Objective: Design a sustainable piece of furniture that will last 150 years, inspired by the spirit of the emeco navy chair





ReWoven Chair Spring 2022

Initial Sketching



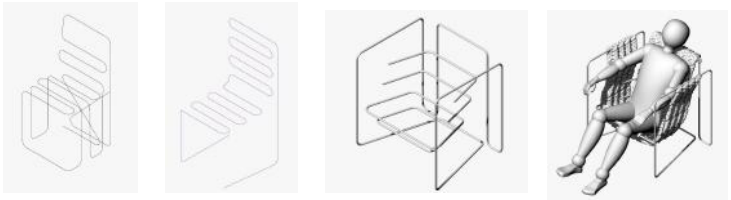
Knot Prototyping

Box Knot

Butterfly Knot

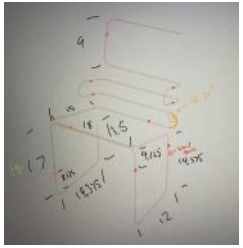
Cobra Knot

3D Sketching



Section Weaving Testing

Final Assembly



See process videos here

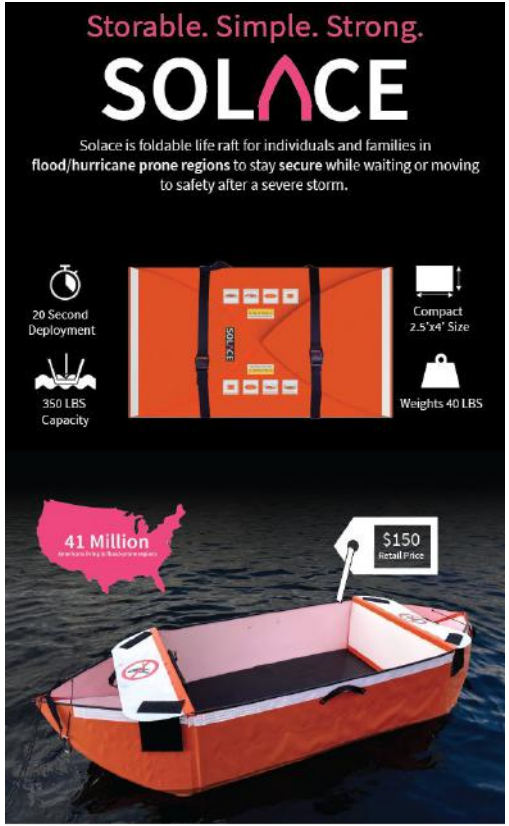
Read article here

Project Solution: Sustainable furniture does not have to be uncomfortable, especially with advancements in recycling. I tackled the issue that makes upholstered furniture so difficult to recycle: its assembly

Tools Used: Rhino, Aluminum Tube bending, weaving and knotting techniques, scale prototyping, softlines design

Solace Fall 2020

Objective: Design and manufacture an affordable, lightweight, and easily storable alternative to traditional emergency life rafts



Deployed

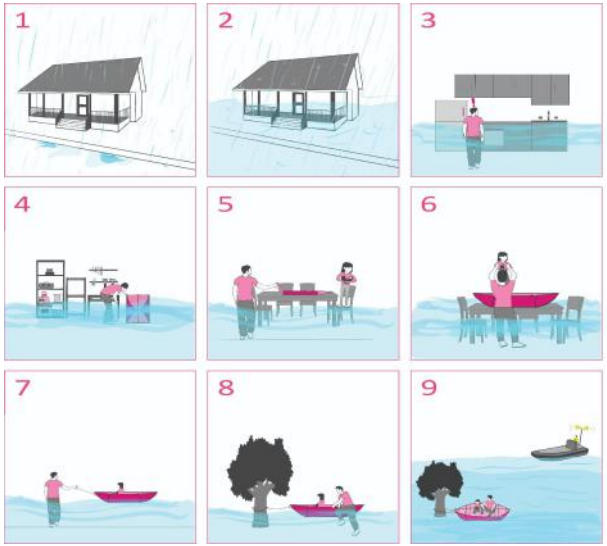
See video here of final product presentation!

Stored

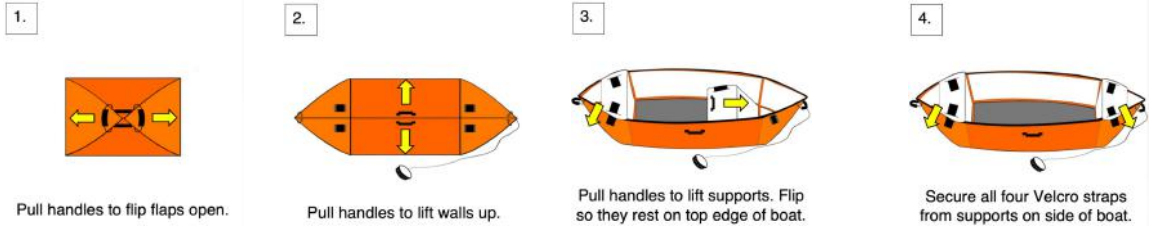
Iterations of Form

Solace Fall 2020

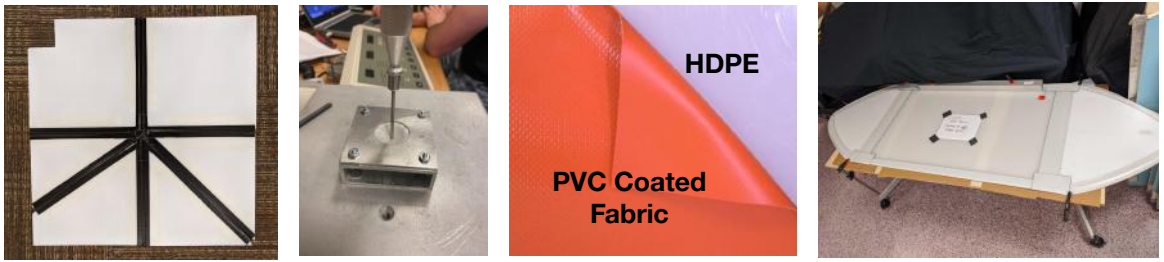
Storyboard



Industrial Design



Material and Seam Testing

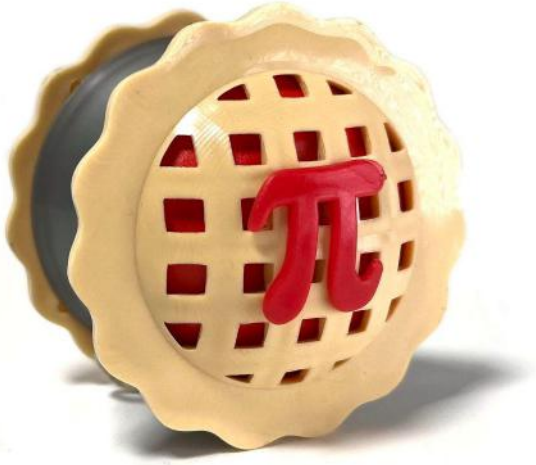


My Role: On this large team of 15 I served as Safety Officer, Lead Industrial Designer, and an R&D engineer for strength and waterproofing of seams

Tools Used: Prototyping with solid and corrugated plastics, performed tensile, puncture, and abrasion tests, Adobe Illustrator and Photoshop

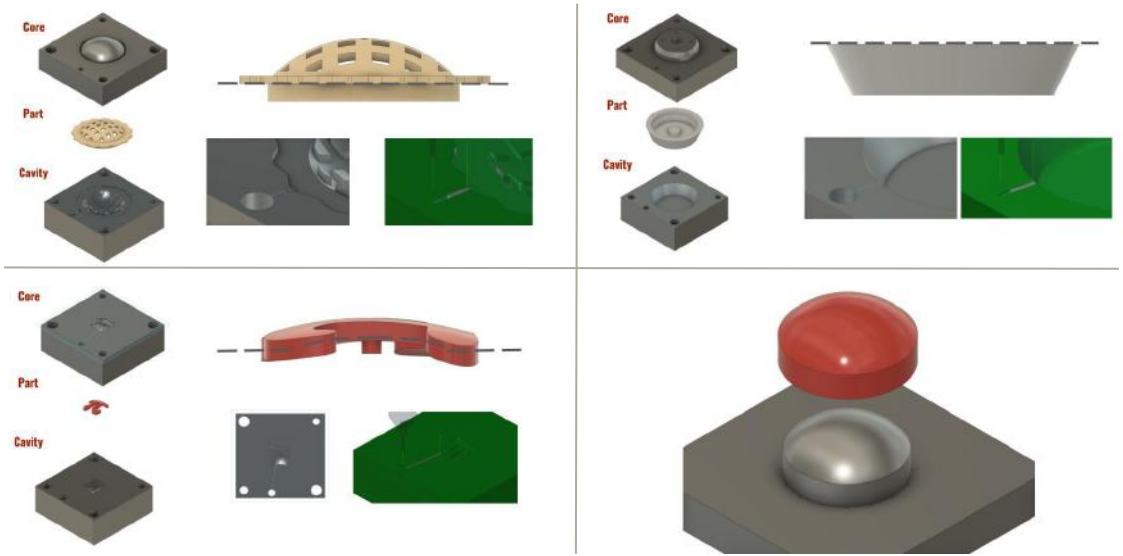
Pi Pie Yo-yo Fall 2021

Objective: Design a yo-yo with injection molded and thermoformed parts with the intention of mass manufacturing

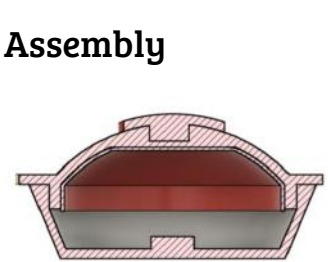


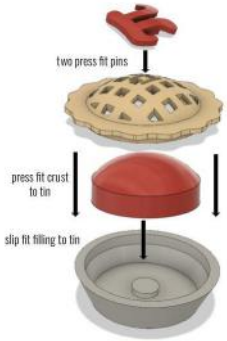
Initial Sketching

Parts and Molds



Assembly

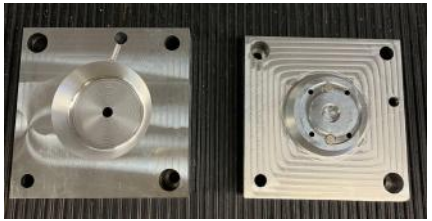




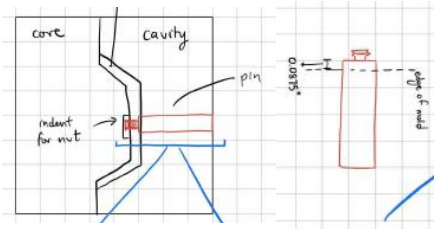
Pi Pie Yo-yo Fall 2021

Injection Molding and Press Fits

Overmolded Parts



Washer for added weighted feel



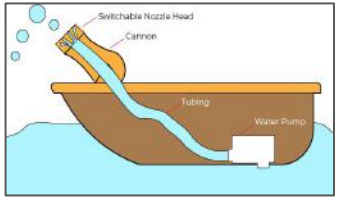
My Role: On this team of 5 I served as a designer, Thermoforming expert, and CNC engineer. This year my team won the **manufacturing award** by manufacturing over 200 yo-yos.

Tools Used: Fusion 360 for collaborative CAD, CAM, CNC milling, Thermoforming, Injection molding, resin 3D printing

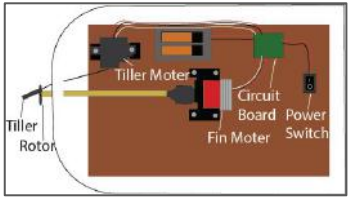
Battle Boats Spring 2018

Objective: Design and prototype an RC boat toy that can shoot and be shot at

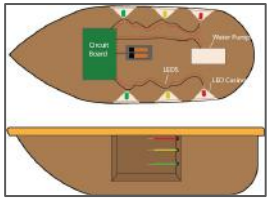
How It Works



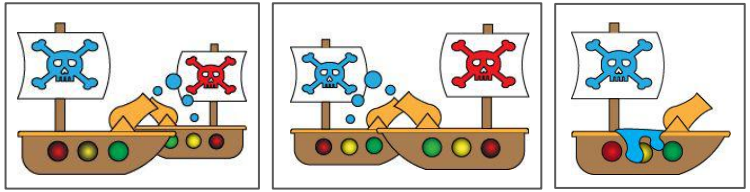
Shooting



Driving


Scoring

How It Plays



See [video here] of final toy presentation!

Prototyping

My Role: On this team of 5 I served mainly as an Industrial designer. I made several iterations of looks like models and tested them with our target consumer: children!

Tools Used: Solidworks, sketching, rapid prototyping with wood and foam, thermoforming, adobe illustrator