

SABRINA TAMAMES

CONTACT

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SKILLS

DESIGN

User Interviews
Secondary Research
Concept Sketches
Story Boarding
Personas
Journey Maps
2-by-2s
Co-Creating Sessions
Leading Workshops
Ideation
Rapid Prototyping
Minimal Viable Product

TECHNICAL

SolidWorks
FEA
Arduino (C++)
MatLab
MakerBot
Fusion 360
Illustrator
Mathematica
Mechanical Drawings
Mechanical Design

MACHINING

Mill
Lathe
ShopBot
Lasercutting
3D Printing
Bandsaw
Drill Press
Sheet Metal Machines

LANGUAGE

Spanish (Fluent)
Chinese (Conversational)
Portuguese (Conversational)

EDUCATION

Olin College Of Engineering Graduating 2020
Bachelor of Science Mechanical Engineering
Focus on Human-Centered Design
Concentration in Business and Entrepreneurship

The University of Vic - Central University of Catalonia Jan - April 2019
Program for Business, Design, and Innovation
Barcelona, Spain

RESEARCH AND DESIGN EXPERIENCE

Toyota Accessibility and Mobility May - August 2018
Design & Research Lead

- Designed fully functional accessible storage solution prototype for wheelchairs with patent pending
- Conducted user research on mobility device users through interviews, created people portraits and 2x2 frameworks, and ideated with concept sketches and cardboard prototyping
- Manufactured the prototype using SolidWorks, 3D printing, laser-cutting, and mill

Designing for Drag Queens Jan - May 2018
User Researcher & Designer

- Designed virtual drag queen trading cards that promote diversity in drag and fan interaction, profiting local drag performers
- Conducted qualitative and quantitative research with users and stakeholders, including 5 local drag queens, 2 costume designers, 2 show hosts, and 4 fans through user interviews, card sorting, and surveys
- Synthesized and presented insights with variety of techniques, including personas and 2-by-2s
- Did blue sky ideation and explored viability of ideas through story-boarding, gallery sketches, and journey maps

The BirdHub - A Smart Bird Feeder Aug - Dec 2017
Mechanical Design Lead

- Designed and manufactured bird-feeder with atmospheric and bird data collection, live imaging, predator prevention, and automatic mechanical food dispenser, to provide live data to local scientists
- Conducted extensive stakeholder research through observation and analysis of local birds, and recruitment of 2 separate ornithologist interviews using written discussion guide

TECHNICAL EXPERIENCE

Avenging a Slain BattleBot Aug - Dec 2018
Designer & Analysis

- Redesigned my previous defeated Battlebot, Sweet Revenge, the competed on ABC's reboot of Battlebots
- Included 3 separate Sprocket and chain drive transmissions, 4 sub-assemblies, and 20 unique part drawings
- Ran full FEA and FOS on all loaded parts, and optimized all parts with FOS less than 3

Inverted Pendulum Self Balancing Robot Aug - Dec 2017
Mechanical Designer & Manufacturer

- Created an inverted pendulum cart with a PI controller capable of keeping the system upright under moderate perturbations
- Implemented dynamics using equations of motions, deriving transfer functions, and created stable control oscillating system

Mechanical Prototyping Sculpture Jan - May 2017
Transmission Designer & Aesthetics

- Designed and built a moving mechanical sculpture inspired by the ocean using SolidWorks, Laser-cutter, 3D printing, Mill, Lathe
- Manufactured working Geneva Drive, gearbox, four-bar linkage, and cam

AutoDesk Jan - May 2018
Fusion 360 Catalyst Intern

- Assist Program Manager in promoting awareness and directly encourage the use of Fusion 360 on-campus
- Deliver on-campus one-on-one training and, created and lead large group workshops
- Establish relationship between campus Machine Shop, Career Center, Project Teams (Formula & Baja), students, professors, and AutoDesk

OTHER EXPERIENCE

Hogar De Niñas Inc. 2013 to Current
Founder/CEO

- Non-profit organization which raises awareness, funding, and supplies for sexually abused girls in Latin America by designing and selling handmade jewelry
- Aims to implement STEM related workshops and after school programs to instill self confidence in victims
- Most recently organized a donation drive to aid victims of Hurricane Irma and helped restore power at foster home by installing solar panels