

# ANDREW HOLMES

PRODUCT DESIGNER

## Boston Scientific | Product Design Capstone (Sept 2018 - Present)

- Senior capstone team of five students exploring designs for next generation disposable endoscopes
- Lead mechanical designer developing prototypes and designs for manufacturability
- Collaborate directly with physicians and nurse technicians to understand and improve the ERCP procedure

## Onshape | UX Design Intern (Jun - Aug 2018)

- Usability testing with Onshape customers to test new and existing features in browser-based 3D CAD application
- Designed workflows, Sketch mockups, UI specifications, and determined edge cases for high priority projects regarding Data Management, Drawings, and in-context Assembly editing
- Managed projects in agile sprint structure, coordinating deadlines and deliverables with developers

## Wheelchair Storage Adaptation | Co-Founder (Mar 2017 - Present)

- Co-Founder Shop Drop Roll LLC, designing wheelchair attachment that enables user to store and access items on their chair without assistance
- Team of three designing lightweight aluminum frames for mass manufacturing, custom building for early stage customers
- Featured in TEDx talk on user-centered design, winner of \$2500 from Northeast Arc Tank and \$2500 from Babson BETA Challenge, provisionally patented

## Baja Racing | Suspension Design (Sept 2015 - Present)

- Redesigned front suspension to replace rod end bearings with welded swivel bearings, creating FEA simulations and reducing major stress concentration
- Designed rear suspension geometry, determining track width, ground clearance, and shock absorber positioning, optimizing for camber gain
- Designing rear-steer geometry for 2019 vehicle, optimizing for Ackerman steering

## Kinetic Light Ramp | Designer (Jan - May 2016)

- Managed team of twelve people designing and building 24' by 24' ramp set piece for performance by dancers who use wheelchairs
- Conducted co-design with clients and prototyped ramps for testing choreography and surface material
- Fabricated full prototype on CNC Shopbot and final design has been used in performances on tour across the U.S.

PORTFOLIO

[andrewholmes.design](http://andrewholmes.design)

CONTACT

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## Olin College of Engineering

B.S. Mechanical Engineering  
3.76 GPA

## Coursework

Mechanical Design  
Thermodynamics  
Fluid Dynamics  
Mechanics of Solids and Structures  
Engineering for Humanity

## Skills

Python  
SOLIDWORKS  
Onshape  
MATLAB  
Mill  
Lathe  
MIG Welding  
Usability testing