

# Hilary Johnson

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## EDUCATION

### MIT

#### SM IN MECHANICAL ENGINEERING

June 2018 | Cambridge, MA

MIT Tata Fellow | GPA: 5.0

### DARTMOUTH COLLEGE

#### THAYER SCHOOL OF ENGINEERING

BA & BE | June 2015 | Hanover, NH

Concentration in Mechanical Engineering

### UWC MOSTAR

#### UNITED WORLD COLLEGE

May 2011 | Bosnia and Herzegovina

International Baccalaureate Diploma

## COURSEWORK

### GRADUATE

Precision Machine Design

Structural Mechanics & Materials

Medical Device Design

Dynamics

### UNDERGRADUATE

#### ENGINEERING

Biomaterials | Product Design

Energy Utilization | Microprocessors

#### LIBERAL ARTS

Human Biology | History of Healthcare

Contemporary Architecture

Development Economics

### CERTIFICATES

Fundamentals of Engineering Exam

SolidWorks Mechanical Design

Professional

## PATENTS

US 2016/0374789 | Filed June 2016

US 62/523882 | Filed June 2017

## SKILLS

### MANUFACTURING

CNC Mill & Lathe • FDM/SLA Printing

Injection molding • Waterjet

### SOFTWARE

SolidWorks CAD/CAM • Matlab

L<sup>A</sup>T<sub>E</sub>X • InDesign • C++

### STRENGTHS

Activator • Developer • Ideation

Arranger • Input

## RESEARCH

### MIT PRECISION ENGINEERING RESEARCH GROUP

#### BRILLE-IT: A LOW-COST, FLEXURAL LABELING TOOL FOR THE BLIND

Aug 2016 - Present | Advised by Prof. Alex Slocum

- Developing 0.1mm precision tool for embossing braille dots on tape using flexural beams and elastically averaged connections. Patent filed.
- Conducting user research and pilot tests in India with local collaborators

## EXPERIENCE

### SYNAPSE PRODUCT DEVELOPMENT | ENGINEERING INTERN

June 2016 – August 2016 | San Francisco, CA

- Implemented top-down surface modeling practices collaboratively to design electromechanical luxury consumer product
- Designed & built testing setup for rapid QC of overmolded parts

### THAYER SCHOOL OF ENGINEERING | DESIGN FELLOW

July 2015 – June 2016 | Hanover, NH

- Invented a wearable biomedical research tool for cardiac imaging
- Developed machine trainings for 2 experiential design oriented courses
- Advised students teams on intro and capstone design projects
- Finessed shop skills in welding, wood working, casting, and molding

### INSIGHT PRODUCT DEVELOPMENT | ENGINEERING INTERN

June 2014 – Aug 2014 | Chicago, IL

- Developed electromechanical architecture for a next gen bench top laboratory diagnostic device
- Conducted DFMA analysis for injection molded parts and developed product confidence testing based on client specifications

## LEADERSHIP

### MIT MAKERWORKSHOP | MENTOR COORDINATOR

June 2016 – Present | Cambridge, MA

- Managing team of 48 mentors fully responsible for machine shop with 1500+ users, recruiting, selecting & training new mentors

### ELEAZAR WHELOCK SOCIETY | BOARD MEMBER

Aug 2013 – Present | Hanover, NH

- Student Director (2013-2015): Managed \$110K annual budget, directed core initiatives and 2 conferences with 30 panelists & 400+ attendees
- Board member: Led purchase of \$1M property & mentoring students

## AWARDS

2017 3<sup>rd</sup>/30 winner of the MIT De Florez Graduate Design & Innovation Award

2015 \$10K Projects for Peace Prize, developed Ghanaian innovation course