# Casey Johnson

## MIT Undergraduate | 4.7 GPA | they/he

### Full–Stack Product Engineer

Candidate for a Bachelor of Science in
Course 4B (Design) and Course 6-3 (CS)
with focus in accessible healthtech

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**Portfolio:**
**caseymjohnson.com**
**@caseymakes (instagram)**

## PROJECTS/CAREER

### SLS Print Process Engineering Intern – Formlabs (2020–2021)

• 12 month full time internship as a process engineer on the Fuse1 SLS team
• Script generation and codebase maintenance for experimental print process work
• Project lead on patent-pending SLS thermal control algorithm
• Project lead on print time analysis and optimization work
• Project lead on SLS layer height testing and settings optimization work
• **Skills:** Project management and leadership, experiment design and data collection techniques, mechanical design in Solidworks and OnShape, PDM versioning, contribution and maintenance of large Github repo, materials testing with Instron and Keyence machines, data analysis and plot design in Python, COMSOL multiphysics modelling, CMM and CNC machine operation, extensive understanding of the SLS and SLA printing processes, hundreds of pages of technical reports authored and edited, thousands of line of Python written and pushed.

### MIT Little Devices Lab Research (2019–)

• Hardware, software, and UI development of low-cost healthtech. Closely working with surgeons and healthcare professionals to identify problems and rapidly prototype solutions. Projects include a sensor network + database + UI, surgical blood loss measurement device, swarm robotics, and more.

### Intern– Cal Poly AWS Digital Transformation Hub(2019)

• Full time summer researcher, developed a robust accelerometer-based surface classification system for E-Scooter behavioral monitoring
Developed an Android app interfacing AWS services for data collection/processing
•Sole author of research paper, pending publication in *Sustainable Cities and Society*

### MIT Media Lab Research – Fluid Interfaces Group (2018–2019)

• Lead designer of mechanical and hardware systems for wearable biomedical device leveraging continuary salivary immunoassays. Published paper, third author

### Startups/Product Launches:

• Pingo3D hobbyist 3D printer (2015; [link](link))
• Succulamp planter lamp (2020; [link](link))
• MiniZip power solutions (2014; [link](link))

### Clubs/Competitions (2015–)

• MakeMIT and  MakeHarvard award winner for iOT prescription compliancy device
• Top 16 finisher in national combat robotics competition (BotsIQ)
• Two-time winner of national animatronics competition
• National top 3 finishes in architectural design, robotics, and structural engineering competitions (Technology Student Association)
• Holds number of PA academic trivia records (Quizbowl)

### Leadership Experience

• Project lead at Formlabs (x3)
• 15.351 Intro To Making teaching assistant (2020)
• Head associate advisor at MIT (2019-)
• Varsity Men's Soccer Captain

### For Fun

Hydroponics - automated gardening system with Raspberry Pi!
Cooking - ask me about my 3D printed sashimi attempts!

## SKILLS

• Industrial Design and Product Development

• Additive manufacturing , CAD/CAM, milling, lathe, electromechanical design

• 10+ years modelling experience in Inventor, SolidWorks, Rhino, Fusion360, 3dsMax, Maya

• Fluent in Python, C++, git

• Data Science experience and Algorithm design

• Keyence/CMM/LTT metrology operation

• Soldering and PCB design

• Android App Dev

• Scientific Writing

## AWARDS

• MakeMIT 2019:
 Infosys Most Innovative,
 Best Twilio Hack,
 Philips Healthcare Award

• Technology Student
 Association National
 Champion (2X)

• National Merit Finalist

• National Latin Exam
 Gold Winner (4X)

• AP Scholar Award

## LANGUAGES

•English (Native)

•Classical Latin (Fluent)