

# DAVID GRIGGS

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## Objective

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Mechanical engineer seeking a collaborative role on a product design team with opportunities for needfinding, concept refinement, rapid electromechanical prototyping, embedded system design, CAD, and DFM.

## Education

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**Massachusetts Institute of Technology**, Cambridge, MA *Jul 2018 – Feb 2021*  
- M.S. Mechanical Engineering, Product Design & Manufacturing, GPA 5.0/5.0  
**University of Virginia**, Charlottesville, VA *Aug 2010 – May 2014*  
- Rodman Scholar, B.S. Mechanical Engineering with High Distinction

## Experience

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**Cofounder at Beluga Innovations**, Cambridge, MA *Nov 2019 – present*  
- Translated core concept into an MVP of a novel ventilator design for low-resource settings.  
- Secured \$25k from MIT Sandbox to run a pilot with collaborators in Uganda (in progress).  
- Coauthoring a publication demonstrating our \$200 MVP's noninferiority versus a \$15k product.  
**Research Assistant at Mechanosynthesis Lab (Prof. A. John Hart)**, Cambridge, MA *Jul 2018 – present*  
- Designed and fabricated a 500W scanning laser system with custom LabVIEW software and high-precision kinematic couplings for use in multiple Selective Laser Melting (SLM) applications.  
- Designed a high-pressure laser melting testbed and studied the effects of pressure on melt track quality.  
**Electronics Design Consultant at ReadRead**, Remote *Nov 2017 – May 2018*  
- Improved Braille toy prototype from ~50% to 99+% successful tile recognition with a custom RFID array.  
- Programmed user experience for children to learn letters, math, music, and simple programming logic.  
**Machine Design Consultant at Pantheon Steel**, Farmington, MO *Dec 2016 – Jan 2017*  
- Reduced press operation cycle time by 66% by augmenting a manual 50-ton press with digital ram actuation, ram position tracking, and hydraulic pressure sensing capabilities.  
- Studied operator behavior/needs and designed a touchscreen GUI with Raspberry Pi 3 and Qt5.  
**Mechatronics Lead at Escape Room Live**, Georgetown, DC *Feb 2016 – Dec 2016*  
- Designed and built 50+ networked electronic props to craft an automated, interactive user experience.  
- Programmed biometric scanners, capacitive sensors, load cells, RFID readers, electromagnets, LEDs, etc.  
**Machinery Engineer at ExxonMobil**, Baton Rouge, LA *Jul 2014 – Nov 2015*  
- Performed root cause analysis, oversaw repair and maintenance for \$30M+ worth of rotating machinery.

## Leadership

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**Mentor at MIT Makerworkshop**, Cambridge, MA *Sept 2018 – Feb 2021*  
- Created a new training procedure for electronics workbench – soldering, heat shrink, power supplies, etc.  
- Regularly trained students in the safe, effective use of waterjet, mill, lathe, CNC router, hand tools, etc.  
**Instructor at Dept. of Mechanical Engineering (UVA)**, Charlottesville, VA *Spring 2013, Spring 2014*  
Singing Steel: The Science of Caribbean Steelpan Making  
- Designed a curriculum on scientific topics relevant to the steelpan art, e.g. work hardening, heat treatment.  
- Led students in practicing every step of the process, from flat steel drum to curved musical notes.  
**Missionary at Church of Jesus Christ of Latter-Day Saints**, East Germany *Aug 2008 – Aug 2010*  
- Trained and mentored up to thirty fellow missionaries at a time.  
- Organized service projects, taught stop-smoking and English classes, gave sermons.

## Skills

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**Hardware Dev:** Solidworks, Fusion 360, COMSOL, FEA/CFD, 3D Printing, most fabrication shop tools

**Software Dev:** MATLAB, LabVIEW, Arduino, RaspberryPi, C++, Qt5, HTML/CSS

**Other:** fluent German, Eagle Scout, cello/handpan/electronic musician