

# DAVID GRIGGS

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## Objective

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Mechanical engineer seeking a collaborative role on a multi-disciplinary product design team with opportunities for needfinding, customer interaction, concept refinement, rapid prototyping, embedded system design, electromechanical design, and design for manufacturing.

## 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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- Senior Mechanical Engineer at Remora Carbon**, Detroit, MI *June 2021 – May 2022*  
- Invented and prototyped a six-stage exhaust conditioning system to enable carbon capture for semi-trucks.  
- Worked with R&D consultants, OEMs, and CMs to create and mount custom subsystem prototypes.  
- Wrote test plans, led road testing, and evaluated system progress toward exhaust conditioning goals.
- Cofounder at Beluga Innovations**, Cambridge, MA *Nov 2019 – present*  
- Created MVP of a novel ventilator design for low-resource settings and secured \$25k MIT Sandbox funding.  
- 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 – Dec 2021*  
- Designed and fabricated a 500W Selective Laser Melting (SLM) system with custom LabVIEW software.  
- Devised a high-pressure laser melting testbed and studied the effects of pressure on melt track quality.  
- Published system design, performance, and preliminary melt track results in *Additive Manufacturing*.
- 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.
- 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, hydraulic pressure sensing, and a custom Qt5 touchscreen GUI.
- 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*  
- Trained students in the safe, effective use of waterjet, mill, lathe, CNC router, electronics, hand tools, etc.
- Instructor at Dept. of Mechanical Engineering (UVA)**, Charlottesville, VA *Spring 2013, Spring 2014*  
- Led students in practicing every step of steelpan production, from flat steel drum to curved musical notes.  
- Designed the curriculum around relevant scientific topics e.g. work hardening, heat treatment.
- Missionary at Church of Jesus Christ of Latter-Day Saints**, East Germany *Aug 2008 – Aug 2010*  
- Led service projects, taught English, gave sermons, trained and mentored up to thirty fellow missionaries.

## Skills

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**Hardware:** Solidworks, Fusion 360, COMSOL, FEA/CFD, 3DP, most workshop tools

**Software:** MATLAB, LabVIEW, Cypress PSoC, Arduino, RaspberryPi, Qt5, HTML/CSS

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