DAVID GRIGGS

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Objective

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

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

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.

Graduate Researcher at Mechanosynthesis Lab (Prof. A. John Hart), Cambridge, MA   *Jul 2018 – May 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

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

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