Richard D. Lehner

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OBJECTIVE

I am committed to working with a group of motivated individuals interested in space exploration. I'm patient, I like challenges, can be scrappy, and I am not afraid to get my hands dirty.

EDUCATION

Georgia Institute of Technology — **Atlanta, Georgia**
- Bachelor of Science in Mechanical Engineering - Graduated Magna Cum Laude — Graduated August 2017
- Lead Varsity Swim & Dive Team as Captain to highest placement in the ACC in the past 6 years — (GPA 3.41)
- Lead community service events as Vice President of Student Athlete Advisory Board
- Two-time Collegiate Scholastic All American Athlete, ACC Academic Honor Roll, Olympic Trials

EXPERIENCE

Space Exploration Technologies Corp (SpaceX) – Maintenance Engineering Intern — **McGregor, Texas**
- Conducted tests and checkouts, installed, and rebuilt equipment for hydraulic and cryogenic systems — *Jan - May 2017*
- Responded to ground hardware issues by troubleshooting, identifying problem scope, understanding requirements, developing Lock Out Tag Out and performance procedures, and communicating solutions (sometimes leading technicians in the field)
- Researched requirements, wrote procedures, and hired contactors for Non-Destructive Testing/ re-inspection of pressure vessels
- Verified redesign and procured hydraulic cylinder for the Stage 1 Shipping Fixture.
- Organized preventative maintenance schedule/procedure for silicone vacuum pump used in densification of LOX
- Allowed for efficient future work by creating, organizing, and recording assets and failure codes in database

McKenney's Inc. – Energy Services and Commissioning Project Manager — **Atlanta, Georgia**
- Managed commissioning for large HVAC systems on newly constructed buildings — *May 2015 - Present*
- Developed functional test scripts, collaborated with engineers in design reviews, and managed approved submittals
- Provided direction to highly skilled field technicians, and provided solutions to complicated problems (mechanical and electrical)
- Developed estimates for startup and commissioning for different types of building systems
- Created/ programmed an artificial intelligence algorithm that detects anomalies from sensor data.
- Set up remote connections in Trane SC Controllers, used data to diagnose problems, and communicated results
- Made current commissioning management methods more efficient by using online tools and macros
- Used blueprints and technical drawings to identify wasted energy and communicate those areas to technicians
- Developed a new way for building advisors to understand their equipment failure plan
- Did building envelope analysis for prospect buildings in Atlanta to estimate utility savings

Aegle BioTech – Lead Mechanical Engineer — **Atlanta, Georgia**
- We have initiated product sales; filing for provisional patent — *May 2017 – Present*
- Consulted for our sponsor, helped start the company, recruited, and designed and built the next prototype
- I led a team of six students to design and build the original device that measures standing balance of the user to improve health
- Interpreted customer wants, estimated what was realistic in 9 weeks, detailed design and specs, and procured parts

Fluid Dynamics of Defecation – Published Georgia Tech Undergraduate Researcher — **Atlanta, Georgia**
- Trained on how to handle Level 2 Biohazards — *May - December 2014*
- Designed and built multiple constructs to create ways to observe radial progression of feces under pressure
- Found viscosity could be calculated by rearranging Reynolds number instead of using rheometry
- Formed relationships in fecal viscosity based on 40+ animal's diet and size

PROJECTS

Arduino (mechatronics) - Measuring Temperature and Humidity – Ultrasonic Sensors — *Fall 2017*
- Built a device that measures distance using an Arduino and an ultrasonic sensor. Results are output to an LCD screen
- Built a device that measures temperature and humidity using an Arduino, and compares it to weather data from an API. Results are cycled on an LCD screen and are recorded on a database.

Creative Decisions and Design — *Summer 2015*
- Our team of four designed and built an automated robot that overcame obstacles in a restricted time limit
- Wrote reports on processes and design decisions.

Heat Transfer — *Spring 2016*
- Developed a model in MATLAB predicting the temperature of a cylinder when exposed to a solar flux
- Wrote a report of our findings and how we came to our conclusion

SKILLS

Instrumentation: Lathes, Milling Machines, Drill Press, Band Saws, Dremels, Soldering, Planers, Oscilloscope, 3D Printers
Fluid Dynamics: Viscous Flow, Bernoulli, Control Volumes, Laminar and Turbulent Flow, Affinity Laws… it's all energy!
Software: MatLab, AutoCAD, Inventor, SolidWorks, Labview (novice), Google Script (Javascript), C/C++, Python, VBA

ATHLETICS

NCAA Division 1 Athlete, *Georgia Tech Men's Varsity Swim Team* — August 2012 – Summer 2016
- Qualified and competed in the 2012 & 2016 US Olympic Trials
- Part of a highly competitive team training 20 hours a week while balancing coursework. I developed skills in teamwork, leadership, delayed gratification, communication, discipline, dedication, and attention to detail.