

# Richard D. Lehner

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## OBJECTIVE

I am a fast learner and team oriented person who is interested in working with motivated people. I enjoy being organized, having multiple projects, and I am not afraid to get my hands dirty. I challenge myself to be the hardest worker on a team and smile every day.

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## EDUCATION

### Georgia Institute of Technology

Atlanta, Georgia

- Bachelor of Science in Mechanical Engineering
  - Captain of Varsity Swim & Dive Team
  - Vice President of Student Athlete Advisory Board
  - Faculty Honors (2013) and Dean's List
  - 2 time Collegiate Scholar All American, 2 time ACC Academic Honor Roll
- Expected Graduation: August 2017  
(GPA 3.38)

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## EXPERIENCE

### Space Exploration Technologies Corp.

### Maintenance Engineering Intern

McGregor, Texas

- Inspected, Installed, and Rebuilt Mechanical Equipment for Hydraulic and Cryogenic Systems
  - Responded to issues with GSE by troubleshooting, writing LOTOs, and communicating solutions
  - Added, Organized, and Improved Assets in Data Base
  - Verified redesign and ordered Hydraulic Cylinder for the Stage 1 Shipping Fixture
  - Researched, Reached out, and hired contractors for NDT and re-inspection of pressure vessels at SpaceX
- Spring 2017

### McKenney's Incorporated

### Energy Services and Commissioning Intern

Atlanta, Georgia

- Did building envelope analysis for prospect buildings in Atlanta to estimate utility savings
  - Used learned knowledge of HVAC to diagnose building problems based on trend data
  - Used blueprints and technical drawings to identify areas wasting energy and communicate those areas to technicians
  - Developed an understanding for Building Controls and used/developed excel macros to easily comprehend new data
  - Part of a team that developed a new way for building advisors to understand their equipment failure plan
  - Part of a team that developed a program that uses internet scraping and parsing to download data points automatically into excel
  - Participated in multiple meetings with customers that were working with a multimillion dollar budget
- Summer 2015 & 2016  
Fall 2016

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## RESEARCH & COURSE PROJECTS

Atlanta, Georgia

### Undergraduate Researcher

- Butterflies Drafting to Oscillating Airflow
  - Fluid Mechanics of the Flying Fish
  - Fluid Dynamics of Defecation
- Observed butterflies react to 12 different oscillating airflows measuring their amplitude and frequency
  - Found 87% of butterflies flying in an air oscillation above 20Hz changed their flight pattern
  - Studied how the Flying Fish and Basilisk Lizard leap from the water's surface without much momentum
  - Worked with a team to design and build a device that monitors changes in motor torque at different water depths
  - Built multiple devices to create ways to safely observe radial progression of feces under pressure
  - Found viscosity could be calculated by rearranging Reynolds number instead of using rheometry
- Fall 2015  
Spring 2015  
Summer & Fall 2014

### Creative Decisions and Design

- Our team of four finished 3<sup>rd</sup> (out of 24) to design and build an automated robot that performed tasks in a restricted amount of time

### Heat Transfer

- Developed a model in MATLAB predicting the temperature of a cylinder made of silicon carbide when exposed to a solar flux
- Our team of four took a finite differencing approach to solving for the temperature distribution within the cylinder

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## SKILLS

**Instrumentation:** Lathes, Milling Machines, Drill Presses, Saws, Soldering, 3D Printer, Various Mechanical Tools, Forklift, Crane

**Material:** Phase Diagrams, Manufacturing Processes, Stress and Strain, Electrical Properties, T-S Diagrams

**Fluid Dynamics:** Common concepts involved in industrial ductwork or piping

**Software:** MATLAB, Python, Auto CAD, Inventor, SolidWorks (Novice), Microsoft Office, VLAB, Labview (novice), NX

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## ATHLETICS

### NCAA Division 1 Athlete, Georgia Tech Men's Varsity Swim Team

August 2012 – Summer 2016

- Qualified for Olympic Trials 2016 & 2012, ACC championships 4 years, & NCAA championships 2 times
- Leadership Council (2014-2015), Representative on the Student Athlete Advisory Board (2013-2016)
- Part of a highly competitive team training 20 hours a week. Developed skills in teamwork, leadership, communication, discipline, dedication, and attention to detail.
- Honors: 2014 Most Improved, Team Record 400 Medley Relay, HS State Record, HS Team Captain and State Champion