(706)-540-3223
trent.slutzky@gmail.com
U.S. Citizen

Trent Slutzky

trentls.me
linkedin/tlslutzky

Skills

Tools and Software	Solidworks, MATLAB, ANSYS, Autodesk Fusion 360, Linkages, OnShape
Languages and Tech	Python, Arduino, Javascript, ReactJS, SQL, MongoDB, Microsoft Office, Excel
Skills & Knowledge	Additive Manufacturing, Machine Shop Tools, CAD, CAM, CAE, FEA Simulation

Technical Experience

NASA RMC Team Lead & Excavation Subsystem Engineer — **Aug. 2020 — May 2021**
Stevens NASA Robotic Mining Competition Team (senior capstone project) — *Hoboken, NJ - 10 mo.*

- Lunar rover designed for autonomous excavation of lunar ice to support NASA's ISRU goals.
- As excavation subsystem engineer, designed and constructed intelligent excavation mechanism capable of collection of icy lunar regolith from 45cm below the lunar surface.
- Created mechanisms that solved complex problems in, excavation, weight reduction, dust-proofing, regolith collection, storage & transport to lander.
- 50 hours of hands-on machine shop experience (milling machine, lathe, hand tools, CAM, Design for Manufacturing)
- FEA Simulations for optimizing designs for reduced mass, since product had strict mass limits.
- First place winner, L3Harris Senior Capstone Project competition.

Web Developer & Software Engineer — **Mar. 2020 — present**
Rocket Club STEM Academy — *New York, NY (remote) - 2 yr.*

- Full-stack engineer developing solutions for the company's transition to fully virtual.
- NodeJS, ExpressJS, MongoDB based RESTful API for handling of data.
- ReactJS front-end administrative dashboard designed for admins and instructors to manage user data, track daily class information, etc.
- Consultant for engineering curriculum accuracy.
- Additional in-person tasks: 3D printer construction and repair, development of mechanical engineering, robotics, programming educational curriculum.

Robotics Design Engineering Intern — **Aug. 2016 — May 2017**
UGA Medical Robotics Laboratory — *Athens, GA - 8 mo.*

- Internship at the University of Georgia Medical Robotics laboratory.
- Researched new techniques in the development of medical devices that utilized non-conventional actuation methods to be used inside of an MRI environment.
- Worked with lab team to design, manufacture and publish paper on an Origami inspired endoscope design for MRI-guided therapy.
- SolidWorks design of various iterations of the endoscope modules.
- Manufacturing of endoscope prototype with FDM, SLA 3D printing, Laser Cut plastics, as well as injection molding.

Robotics Club President — **Dec. 2019 — Dec. 2020**
Stevens Robotics Club — *Hoboken, NJ - 1 yr.*

- President of my university robotics club, which had over 30 active members.
- Mentored club members on many aspects of robotics from mechanical design to programming.
- Managed a club budget of over 25 thousand dollars, while helping to grow the club membership numbers.
- Held workshops for Stevens students about CAD, MATLAB, ROS, Soldering among other topics.

Projects & Achievements

Origami-inspired Robotic Endoscope for guided surgery in an MRI environment - published 2019	2018
Stevens Institute of Technology ASME member	2017-2019
Stevens Institute of Technology Robotics Club President	2019-2020
First Place - ASME EFx Rutgers CAD Design Competition	2019
L3Harris Senior Capstone Program Winner, NASA Lunar Rover	2021

- My entire portfolio is detailed on my website - trentls.me

Education

BSc. Mechanical Engineering, *Stevens Institute of Technology* - **GPA:** 3.516 / 4.0 — 2017 - 2021
Concentration in Robotics & Autonomous Systems
Coursework: Mechanics of Materials/Mechanics of Statics, Circuits and Systems, Engineering Design (Solidworks, Circuit design, MATLAB), Thermodynamics, Fluid Mechanics, Materials Processing, Design of Machine Components, Heat Transfer, Thermal engineering, Modeling and Simulation, Control Systems, Robotics I, Mechatronics I, Autonomous Navigation of Mobile Robots