

Alex Lueker

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Proactive and motivated Mechanical Engineering student passionate about a summer internship
Excellent communication skills frequently used within the global engineering environment
Desiring to contribute in a cutting edge, collaborative team environment to redefine the future

Skills:

- SOLIDWORKS CAD and Drawings, Microsoft Office, Working Model 2D, MATLAB, Arduino, LabVIEW, FLUENT CFD, VXEelements 3D scanning, FEA, SCCA Full Competition Racing License
- GTAW(TIG) Welding, Solder Bonding, Electro-Mechanical Assembly/Test, CNC Machining

Education:

- 3rd year Mechanical Engineering student at Colorado State University, 3.5 GPA
- Machining Lab, Fluid Dynamics, Differential EQ, Statics, Machine Dynamics, Thermodynamics, Electrical Eng, Mechatronics, Finite Element Analysis, Computational Fluid Dynamics

Experience:

Lab Internship Promotion - Colorado State University ME LPG Spray Imaging (2022-present)

- Given leadership responsibility for managing LPG injector tests, delivering accurate results on schedule
- Collaborated with engineers worldwide via Microsoft TEAMS remote environment
- Utilize 1 Joule laser imaging of fuel injector initiated turbulent gasses in high pressure, engine environment

Mechanical Assembly Technician - 308 Systems Inc. (2015 - present)

- Assembled and installed remote wifi relay towers for the city of Fort Collins, Colorado Water Utility
- Performed multiple RF data/speed tests to optimize signal strength and satellite throughput
- Gained detailed mechanical assembly/prototyping experience building complex field deployable military communication kits. Assembled custom power supplies, wiring harnesses, and enclosures on schedule

Car Race Performance Engineering - Velocita Lueker Racing Team (2022 - present)

- Set brake bias, ride height, and corner weight, and optimized body aerodynamic settings
- Ran tire and fuel pressure tests under real track conditions to improve checkered flag position
- Collaboratively configured/implemented in-car UHF pit communications via throat mic

3D Modeling/Aerodynamic Performance Engineering - Velocita Lueker Racing Team (2022 - present)

- Creatively re-engineered nonfunctional legacy Creaform handheld 3D laser scanner to 3D model team cars
- In process of developing 3D SOLIDWORKS/ FLUENT CFD model to optimize bodywork aerodynamics

Co-Owner/Competition Driver - Velocita Lueker Racing Team (2022 - present)

- Perform track validation of car engineering enhancements, improved times to within 10 seconds of leader
- Executed complete car tear-down/rebuild, rewired and improved dashboard gauge performance
- Constructed 32 ft race trailer with living quarters, installing all mechanical, electrical and plumbing systems

Universidad Carlos III de Madrid - Study Abroad (Fall 2023)

- Creatively adapted to, and completed, engineering courses/labs abruptly changed from English to Spanish

Engineering Design - Final Design Competition (Spring 2023)

- Great success and great failure in both communication and execution of final project design

Personal Interests

Rockets and Aircraft

- AIAA - CSU Student led Design Build Fly flight competition team
- Currently building final plane for 28th Design/Build/Fly Competition in Wichita

Cooking

- I enjoy the challenge of creating new culinary textures, flavors, and colors by combining worldwide foods