# Ryan Latulippe

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**Mechanical Engineering Student - Northern Arizona University**

Motivated, hardworking, reliable, responsible fourth year mechanical engineering student with high integrity looking to earn employment in the engineering field following my graduation with a bachelor's degree in mechanical engineering. Experience in team environments through multiple engineering projects throughout my schooling thus far, some of which are explained below. Willing to learn and adapt in a fast-paced environment. Strong analytical and problem-solving skills. Experience with quality customer service, satisfaction, and focus. Effective communication skills through customer service experience, working with large crowds, and working through high stress and fast-paced situations. Knowledge of HVAC systems through MEP engineering internship with Syska Hennessy Group, learning Revit, Bluebeam, and AutoCAD in the process. Fluent in SolidWorks CAD programming, and familiar with MATLAB code through Northern Arizona University classes and projects. Experience with computer numerical control (CNC) machining. Demonstrated academic excellence by achieving Salute to Education Ford Scholarship.

- Strong background and education in mechanical engineering and design
- Basic understanding of engineering concepts, principles, and theory.
- Knowledge of suspension components and systems through SAE Baja capstone project and personal interest.
- Proficiency in AutoCAD and SolidWorks 3D CAD software
- Performed 3D mechanical design of components
- Basic understanding of finite element analysis.
- Basic knowledge of manufacturing processes, such as machining, welding, or 3D printing.
- Experienced in working with teams across multiple different disciplines
- Generated designs and tested concepts to achieve desired goal (SAE Baja Capstone Project)
- Worked with machine shops or other suppliers to manufacture and procure custom hardware

## Industry Experience

**Mechanical Engineering Intern – Syska Hennessy Group, San Diego, CA** (May 2024 – Aug 2024)

- Worked with Syska Hennessy MEP engineers throughout the county designing well engineered HVAC systems and ductwork layouts for various high-level clients.
- Focused on one main project that used water source heat pumps.
- Designed ductwork and placed HVAC units in Revit, carried out markups through Bluebeam, selected HVAC units based on the project scope through industry representatives. Created zoning plans based on the job layout and attended a site visit in the construction administration phase of the project.
- Attended and networked with other San Diego office interns through intern team building and informational meetings, learning MEP trade skills during our internship.
- Learned how to create load calculations based on various regions and envelopes of the job layout.
- Created a presentation at the end of the internship based on the project scope, my roles within the project, roadblocks, and lessons learned.

## Projects and Educational Experience

**ME 476C/486C (Mechanical EGR Design 1 and 2) (SAE Baja)** (Jun 2024 – Present)
***Group Member, suspension subteam, front suspension engineer***

- Team is designing a mini baja vehicle within certain constraints set forth by SAE to compete against various other schools/groups from around the west coast in the SAE Baja competition.
- Designing/testing front suspension components using SolidWorks, FEA, Optimum Kinematics suspension analysis software in order perform at a high level in testing and at competition.
- Collaboration across sub-teams to accomplish the ultimate end goal of designing a high quality and well performing baja race vehicle.
- Supports both the senior capstone project and representing NAU in the SAE Baja competition.

**ME 386 (Engineering Design: The Method) (Modular Active Aerodynamics Package)** (Jan 2024 – May 2024)
***Group Member***

- Team created an active aerodynamic wing that can be retrofitted onto any vehicle.
- Completed all steps presented by our instructor which emulated creating a product that does not exist.
- Carried out a literature review, concept generation, a QFD, created 3D models of our wing using SolidWorks, created a cost analysis, mathematical analysis, and created an AR model using Blender of the wing working on a vehicle of our choice (C5 corvette). Slide deck is attached here.

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**ME 286 (Engineering Design: The Process) Final Group Project** **(Jan 2023 – May 2023)**

- Created a research project surrounding the automotive industry.
- Researched how different aspects of engineering design process and manufacturing processes (human-centered design, plastic injection molding, sheet metal forming, additive manufacturing, sustainability, and automation/robotics) come into play with the industry chosen.
- Learned the manufacturing side of engineering and how certain manufacturing processes are used within vehicles and all the different components of vehicles.

**EGR 186 (Introduction to Engineering Design) W.L Gore Engineering Group Project** **(Jan 2022 – May 2022)**
***Group member, documentation, formatting, and control***

- Created and inspired fidget toy creation presented to a well-known engineering company in Flagstaff—W.L. Gore & Associates—to then be judged and critiqued in an engineering work environment.
- Compiled a group presentation addressing our problem statement and the overarching goal of the project/product, the constraints, stakeholders, a Gantt chart, a suite of potential designs/solutions, testing/prototyping and further analysis, and a final result with CAD blueprints.
- Utilized SolidWorks for design and implementing constraints.
- Produced a real-life representation of the toy through 3D printing with MakerBot 3D printers.

**ME 180 (Computer-Aided Design) Final Project** **(Jan 2022 – May 2022)**

- Demonstrated SolidWorks skills used in the class by creating an assembly with at least 10 parts.

## Education

**Northern Arizona University – *Flagstaff, AZ (GPA: 3.14)*** **(Aug 2021 – May 2025)**

- Targeting achievement of a bachelor's degree in mechanical engineering.

## Job Experience

**Cashier – The Coupe, Flagstaff, AZ** **(Jan 2022 – present)**

- Provide positive, friendly customer service for students and staff.
- Develop great communication skills by dealing with large crowds and working closely with other staff

**Computer Numerical Control (CNC) Operator – Genesis Woodworking, Escondido, CA**
**(Jun 2022 – Aug 2022; Jun 2023 – Aug 2023)**

- Operated the Homag CNC machine at a cabinetry shop for builders constructing custom cabinets.
- Gained experience with production lines, manufacturing, and CNC operation and provided high-quality, detail-oriented production support.
- Learned WoodWop (3D programming/machine support system) code, efficiently programing CNC machine, and ensuring accurate dimensions of cabinet pieces.
- Learned to build the cabinets efficiently in the shop, as well as helped with other smaller tasks.
- Created an organization system involving QR codes for more effective, efficient stocking processes for hardware and materials that is accessible for anyone who needs new stock.
- Gained experience in different fields and settings while supporting my college education as a seasonal position while home for the summer from Northern Arizona University.

**Trailer Delivery Technician - Happy Heart Trailers/Self Employed, Valley Center, CA** **(Jun 2022 – present)**

- Delivered and set up various camping trailers for families in North San Diego County and surrounding areas.
- Provide families/groups quality time while providing positive customer service during delivery and set-up.
- This is a seasonal position while home for summer or other breaks from Northern Arizona University.

## Skills

SolidWorks Revit Bluebeam MATLAB code familiarity Microsoft suite Google Suite
Leadership Teamwork Technology CNC WoodWop software familiarity
Homag CNC Machine familiarity