Milan Rosic

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EDUCATION

University of California, Berkeley *Expected May 2025*
Master of Engineering, Mechanical Engineering (Aerospace Engineering Concentration) *GPA: 3.70*

University of Massachusetts, Lowell *May 2024*
Bachelor of Science, Mechanical Engineering *GPA: 3.88*
- Summa Cum Laude
- NCAA D1 collegiate soccer (Named America-East Conference All-Academic Player for the 2022 season)

COMPUTER & ADDITIONAL SKILLS

Software: Siemens NX, SolidWorks, ANSYS, Teamcenter, Microsoft
Programming: MATLAB, Python
Engineering: GD&T, CNC Machine, Laser Cutting, 3D Printing, Technical Writing
Languages: English, Serbo-Croatian, Spanish

WORK EXPERIENCE

Mechanical Engineering Intern **San Mateo, CA**
Alef Aeronautics *June - August 2024*
- Designed and developed key components for Alef Aero's flying car, such as motor mounts, door mechanisms, and cabin support systems, using SolidWorks. Created detailed engineering drawings to guide external manufacturing processes.
- Leveraged various 3D printing technologies and filaments for rapid prototyping, enabling iterative testing and refinement of parts before finalizing designs.
- Designed carbon fiber molds in CAD, generated G-Code for CNC machining, and performed carbon fiber layups for cabin frame components.
- Conducted extensive hands-on assembly, ensuring precision and quality across various mechanical systems and components.

Undergraduate Research Assistant **Lowell, MA**
University of Massachusetts, Lowell *October 2023 - May 2024*
- Led a project aimed to analyze drone flight paths through urban canyons.
- Investigated existing aerodynamic studies and sensor applications, delivering strategic recommendations to project sponsors.
- Developed advanced Computational Fluid Dynamics (CFD) models using ANSYS Fluent to examine airflow dynamics within urban environments.
- Contributed to the planning and execution of wind tunnel experiments to support theoretical model validations.

Product Definition Engineering Intern **Lynn, MA**
GE Aerospace *May - August 2023*
- Developed precise 2D drawings, 2D cross sections, and sophisticated 3D CAD models to facilitate crucial functions, including manufacturing, assembly, quality, and inspection.
- Collaborated seamlessly with multiple engineering departments, successfully implementing over 80 drawing modifications for the F414 afterburner casing module while upholding GE's procedural standards.
- Utilized Siemens NX to expertly craft intricate 3D CAD models and 2D drawings, preserving the authenticity of legacy designs.

RELEVANT PROJECTS

Learning-Based Wind-Aware Planner for Drone Bridge Inspection **Berkeley, CA**
University of California, Berkeley *August 2024 - Present*
- Developing a wind-aware navigation planner for drones in bridge inspections, aiming to integrate real-time wind data into flight planning algorithms.

“B737” Wing Loading Analysis **Lowell, MA**
University of Massachusetts, Lowell *April 2024*
- Performed FEA on a “B737” wing to analyze lift, drag, and engine weight forces, to analyze structural integrity.
- Designed a swept-back wing using a NACA 2414 airfoil in Abaqus, incorporating spars and ribs to ensure structural integrity under loading conditions.
- Utilized ANSYS Fluent to calculate aerodynamic forces and Abaqus to measure stress and deflection.

Riverhawk Racing (Formula Society of Automotive Engineers) **Lowell, MA**
University of Massachusetts, Lowell *September - December 2022*
- Worked in a team to develop an open wheel formula style race car for a competition hosted by SAE.
- Utilized SolidWorks to design car body panels and conduct Computational Fluid Dynamics (CFD) analysis, optimizing aerodynamic performance and efficiency.

Go-Kart Project **Burlingame, CA**
Self-Initiated Project *May - June 2020*
- Successfully fabricated a fully functioning motorized go-kart from the ground up.
- Utilized SolidWorks to create comprehensive designs, and effectively managed material procurement, conducting detailed analysis of parts' cost and quality.