Zining (Grace) Yu

+1 (512) 662 6388 zininggraceyu@gmail.com

Objective

Diligent university student with a strong design-for-assembly-and-maintenance mindset, offering a wide array of technical skills and extensive R&D experience. Currently seeking a mechanical or aeronautical engineering internship position in the automotive industry.

Education

Rensselaer Polytechnic Institute, Troy, NY May 2027
Bachelor of Science in Aeronautical Engineering and Mechanical Engineering

Meadowridge School, Maple Ridge, BC, Canada Sep. 2018 to May 2023
Class of 2023, International Baccalaureate Diploma, graduated with Summa Cum Laude

Skills

Software: SolidWorks, Siemens NX, GitHub, Visual Studio Code, Python, Java, MATLAB, Simulink, Web Development, Microsoft Office
Manufacturing: Carpentry, Metal Work, CNC, Soldering, Welding, 3D Printing, Laser Cutting
Additional Relevant Skills: Automotive Repair and Customization, Rapid Prototyping

Research

CRC-3 Vertical-Takeoff Fixed-Wing Aircraft Dec. 2023 to Present

-

Machine Learning Based Cost Reduction of Airfoil Optimization July. 2021 to May 2022

- *Researched and attempted to create a cost-effective alternative to computational fluid dynamics for optimizing airfoil and vortex generator geometries using data augmentation.*
- *Compared the computational cost of classical computational fluid dynamics and evaluated the accuracy and runtime of various different generative machine learning models for airfoil design and optimization (2022 Canada Wide Science Fair, top 10 overall project).*

Student on the Beamline Mar. 2021 to Aug. 2022

- *Experimentally assessed the impact of different (x-ray) exposure times at cryogenic and room temperature on Bovine Insulin proteins using the CMCF Bending-Magnet beamline at the Canadian Light Source Synchrotron Accelerator.*

Damped Oscillation of a Sphere Sep. 2021 to Dec. 2022

- *Investigated the change in damping effect of aqueous glycerin solutions as a function of viscosity and concentration, on an oscillating, submerged mass-spring system.*

Relevant Experiences

Rensselaer Motorsport Sept. 2023 to Present
Chassis and Suspension Manufacturing Lead (Dec. 2023-Present)
FIRST Robotics Aug. 2016 to May 2023
Technical Director for Entradox Robotics #14316 (2018-2023)
FIRST mentor and volunteer (2020-2023)
Apprentice Mechanic July 2021 to Aug. 2023

Awards

Rensselaer Leadership Award, Rensselaer Polytechnic Institute 2023
FIRST Tech Challenge Dean's List, British Columbia Finalist, FIRST British Columbia 2022
Gold Excellence Award and NSERC Young Innovator's Award, Canada-Wide Science Fair 2022

References Available upon Request