

Alisa Mizukami

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Portfolio: AlisaMizukami.com

EDUCATION

Macaulay Honors College at The City College of New York, New York, NY
Bachelor of Engineering, Mechanical Engineering

GPA: 3.68
December 2020

SKILLS

Computer Skills: ANSYS (Workbench, Mechanical APDL, Fluent); MATLAB; SolidWorks (Simulation, HSMWorks); Oracle Crystal Ball; Microsoft Excel; PowerPoint; Word

Certifications: OSHA 30-Hour Construction, Six Sigma White Belt

Language: Fluent Japanese

RELEVANT WORK EXPERIENCE

Research-Development-Design Intern, Actasys, Brooklyn, NY

- Designing and testing nozzle attachments to synthetic jet actuators, increasing jet width by 50%.
- Constructing 13 drivers to convert 12V input to 120V output, decreasing frequency from 300 Hz to 50 Hz and making compatible with current actuator design.

Advanced Manufacturing Apprentice, Zahn Innovation Center, New York, NY

September 2019 – May 2020

- Manufacturing client-requested products by lathing, milling, laser cutting, and using hand tools.

Structures Intern, Pratt & Whitney, East Hartford, CT

June 2019 – August 2019

- Conducted a modal analysis of high-pressure turbine blades mounted in testing blocks by FEA using ANSYS MAPDL to obtain contours of displacement and principal stresses.
- Interpreted contours to investigate locations of stress singularities, conclude locations of likely fracture, and summarize results in a presentation to compare against future modal analysis lab tests.

Technical Intern II, BAE Systems Inc., Nashua, NH

January 2019 – May 2019

- Performed statistical tolerance analysis using Crystal Ball by compiling dimensions from engineering drawings and CAD models in spreadsheets to conclude the feasibility of changing a part design.

ACADEMIC PROJECTS

Senior Design: Personal Fire Escape System

January 2020 - Present

- Working as a team of 6 to design a window escape system that descends a user at a constant speed, regardless of weight. Project can be found here: <https://amizuka000.github.io/fireescape/>

SolidWorks Simulation: Static Analysis of a Clothes Hanger

Fall 2019

- Worked as a team of 4 to conduct experiments and compare outcomes with FEM analyses, validating results using displacement, convergence, sensitivity, and analytical tests.
- Suggested design changes using failure theory, testing improvements using validated FEM model results.

RESEARCH EXPERIENCE

Research Assistant, Experimental Fluid Mechanics and Aerodynamics Laboratory, City College of New York

September 2017 – August 2020

- Perform cross-platform computational fluid analysis by using SolidWorks to model, ANSYS Fluent to mesh, and OpenFOAM to compute, utilizing advantages of each software to speed up the process.

AFFILIATIONS

Creative Director, ASME City College Chapter

October 2016 – May 2020

AWARDS

Full Merit Scholarship, CUNY Macaulay Honors College

August 2016 - Present