

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: 3.65
December 2020

SKILLS

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

RELEVANT WORK EXPERIENCE

Advanced Manufacturing Apprentice, Zahn Innovation Center, New York, NY September 2019 – Present

- Attend workshops on machine use including lathing, milling, laser cutting, and CNC, as well as professional development.
- Used a statement of work to research building plans and materials for an outdoor pet-safe cat house, constructed a 3D model, and created a bill of materials.

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 finite element analysis 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 lab test results.

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.
- Assisted in hardware qualification by verifying product tolerances with statistical analysis results.

ACADEMIC PROJECTS

Senior Design: Personal Fire Escape System January 2020 - Present

- Designing a purely mechanical braking system that adjusts force on brake pads according to user weight, allowing a constant-velocity descent along a rope.

SolidWorks Simulation: Static Analysis of a Clothes Hanger November 2019 – December 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 and supported the design using validated FEM results.
- Took charge of designing a 15-minute presentation summarizing our problems and workarounds.

RESEARCH EXPERIENCE

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

September 2017 – Present

- 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 – Present

AWARDS

Full Merit Scholarship, CUNY Macaulay Honors College

August 2016 - Present