**Alisa Mizukami** Forest Hills, NY | +1 (347)-361-3434 | alisamizukami@gmail.com

**Portfolio:** AlisaMizukami.com

**EDUCATION**

**Macaulay Honors College at The City College of New York, New York, NY** GPA: 3.65

Bachelor of Engineering, Mechanical Engineering 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