

BRYAN CULLANO

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EDUCATION

New Jersey Institute of Technology

Newark, NJ

M.S., Mechanical Engineering / GPA: 4.0

Sep 2020 – May 2022

B.S., *summa cum laude*, Mechanical Engineering / GPA: 3.96

Sep 2017 – May 2021

- Albert Dorman Honors College, Pi Tau Sigma Honors Society, NJIT Solar Car Development Team

PROJECTS

Sit and Stand Assist Wheelchair

Spring 2021

- Modeled and designed frame, tilting mechanism, and the standardized parts for a wheelchair in SolidWorks to assist a patient in and out of a seated position
- Performed stress analysis on wheelchair frame to ensure extreme loading conditions met a minimum factor of safety and experience minimal deformation

Firefighting Drone Mechanism

Fall 2020

- Designed and developed a launcher mechanism with 3 colleagues that can easily mount to a standard F450 drone frame to launch a projectile with an extinguishing agent
- Conducted mass property analysis in SolidWorks to optimize weight and location of center of gravity

EXPERIENCE

Merck

May 2021 – Aug 2021

Sterile & Specialty Products Intern

Kenilworth, NJ

- Modeled and 3D printed impeller designs to replicate industrial-scale mixing conditions in a lab setting and investigate geometric effects
- Supported experimental data with CFD in Ansys Fluent to examine flow patterns and volume fraction
- Developed a Python script to extract data from DynoChem toolbox and produce a user-friendly summary sheet for scale-up/down processes

Stealth Indoor Vertical Farming Venture

Jul 2019 – Mar 2020

Engineering Intern / Assistant Project Manager

Greater NYC Area

- Implemented and tested plumbing systems for critical research and development facility, ensured on-time delivery of an error-free, fully functional plumbing system
- Trained, supervised, and mentored 5 engineering interns, ensuring that all subordinates achieved required technical skills in plumbing and mechanical systems
- Redesigned and executed mechanical system configuration to free up 30% of space for other systems

NJIT Electrical & Computer Engineering Department

Jun 2019 – Jul 2019

Research Assistant

Newark, NJ

- Collaborated in a cross-functional team of mechanical and computer engineers to simulate 360° view driving using RC cars, cameras, and 3D printed parts designed in Creo to drive through a scale model of Newark
- Created MATLAB program to show multiple landscape view windows of a radial image to be used in LabVIEW graphical user interface

SKILLS

CAD: Creo (Advanced), SolidWorks (Advanced), Ansys (Intermediate), AutoCAD (Intermediate)

Programming: Python (Intermediate), HTML & CSS (Intermediate), C/C++ (Basic), MATLAB (Basic)