

MOUHAMMAD R. DIA

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EDUCATION

CORNELL UNIVERSITY, COLLEGE OF ENGINEERING

Ithaca, NY

SIBLEY SCHOOL OF MECHANICAL AND AEROSPACE ENGINEERING

Graduation Date: May 2028

Candidate for Bachelor of Science in Mechanical Engineering

Relevant Coursework: Statics and Mechanics of Solids, Thermodynamics, Electromagnetism, Differential Equations, Dynamics

SKILLS

TOOLS & PLATFORMS: Catia, Fusion, Onshape, Unity, Arduino, Jupyter Notebook, ShowIt, Power BI, ImageJ, Excel

PROGRAMMING LANGUAGES, FRAMEWORKS, & LIBRARIES: Python, Java, C++, HTML, Pandas, NumPy, Matplotlib

TECHNICAL EXPERIENCE

TOYOTA NORTH AMERICA

Saline, MI

Vehicle Design Engineering Intern

May 2025 - August 2025

- Generated installation and assembly drawings using Catia to issue detailed instructions to manufacturers and suppliers
- Employed 3D generative design and surface modeling to update part reference data per a list of tolerancing requirements
- Analyzed production and warranty metrics using Excel and Power BI to meet goal of 5 claims per issue by release month

CORNELL CUP ROBOTICS TEAM

Ithaca, NY

Mechanical Sub-Team Member

January 2025 - Present

- Built propulsion and stabilization components allowing NASA Astrobee-inspired robot maneuvering in zero gravity
- Programmed software on Unity3D to simulate physical conditions of space and test direction and thrust values for robot
- Developed, constructed, and troubleshooted mounts and brackets for electronic components using Fusion 360 software

ACCESS PUMP

Ithaca, NY

Team Member

November 2024 – December 2024

- Built lactation device to benefit mothers with hearing and/or visual impairments using vibrations and motion sensors
- Researched physical stimuli, gravitational flow, and noise-cancelling devices to increase milk-flow and accessibility
- Collaborated with a team of 5 to write a technical report and business plan for the design and presented to the class

CATALYST PRE-COLLEGE ACADEMY

Ithaca, NY

Student Researcher

July 2023

- Researched with the Center for Research on Programmable Plant Systems on uses of technology within agriculture
- Designed a rover to extract data from soil and calculate its potential for erosion using the HEL Soil Erodibility Index
- Studied biological engineering and nanotechnology and analyzed data from farms using an “internet of living things”

LEADERSHIP

NATIONAL SOCIETY OF BLACK ENGINEERS (NSBE) – CORNELL CHAPTER

Ithaca, NY

Programs Chair

May 2025 – Present

- Lead and coordinate meetings for a committee of 6 to organize and execute events for the 400+ members of the chapter
- Collaborated with the members of the executive board to run internal affairs, work with sponsors, and grow the club
- Engaged in conferences to gain professional experience and advance development with industry partners and chapters

PROFESSIONAL EXPERIENCE

OUR TEAM WORKS INC.

West New York, NJ

Academic Tutor

July 2024 – August 2024

- Tutored 20 students from 6th to 12th grade in various STEM-related subjects such as calculus, physics, and chemistry
- Organized company website and increased overall engagement through newsletters and updated employee database
- Maintained office and effectively managed supply replenishment system which contributed to a seamless workflow

CERTIFICATIONS & AWARDS

CORNELL UNIVERSITY BRIDGES SCHOLAR

August 2024

- Awards students from underrepresented communities who have demonstrated excellence and passion in engineering

CTE CERTIFICATION IN COMPUTER SCIENCE

June 2024

- Certifies students who have completed four-year long career and technical education coursework in computer science