

# MOUHAMMAD R. DIA

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## EDUCATION

**CORNELL UNIVERSITY, COLLEGE OF ENGINEERING**  
**SIBLEY SCHOOL OF MECHANICAL AND AEROSPACE ENGINEERING**  
*Candidate for Bachelor of Science in Mechanical Engineering*

**Ithaca, NY**  
*Graduation Date: May 2028*

**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

*Vehicle Design Engineering Intern*

**Saline, MI**  
*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

*Mechanical Sub-Team Member*

**Ithaca, NY**  
*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

*Team Member*

**Ithaca, NY**  
*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

*Student Researcher*

**Ithaca, NY**  
*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

*Programs Chair*

**Ithaca, NY**  
*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.

*Academic Tutor*

**West New York, NJ**  
*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