

Adwoa Manu

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EDUCATION

August 2015-Present **Manhattan College** Riverdale, NY

Bachelor of Science in Mechanical Engineering, Minors in Math and Digital Media Art

GPA:3.2

Presidential Scholarship, National Science Foundation, (NSF) S-STEM Scholarship, American Society of Heating Refrigerating and Air-Conditioning Engineers (Treasurer), Society of Women Engineers, American Association of Mechanical Engineers, Engineering Ambassadors (Team Leader)

RELEVANT COURSES: Introduction to Thermodynamics, Fluid Mechanics I, Technical Graphical Communication, Introduction to Engineering Optimization, Thermal/Fluids, Green Building & Design

SKILLS

Computer: Proficient: MS Word, PowerPoint & Excel, NX; Intermediate: Revit, AUTOCAD, MATLAB, ANSYS(Fluent)

Language: Fluent in English, Native in Twi

RESEARCH

PROJECTS

Senior Design Project: Solar Decathlon in Cali, Colombia

September 2018-Present **Manhattan College** Riverdale, NY

- Working with Architecture, Civil & Electrical engineering students in Colombia and Germany to build a sustainable house that meets the needs of its occupants for the 2019 Solar Decathlon in Cali Colombia
- Using REVIT to create a simple model of architectural design and perform energy analysis
- Creating CFD model of house using ANSYS(Fluent) to simulate wind flow and heat transfer

RESEARCH

Current Research

Finding local materials in Ghana to build an affordable and efficient solar cell

Summer Research Scholar

Research topic: **Analyzing solar PV panels and finding local materials in Ghana to build an affordable panel**

June 2018-October 2018 **Manhattan College** Riverdale, NY

- Experimented with dye sensitized solar cells by replacing TiO₂ with different types of clay
- Used excel for solar irradiation calculations to find the optimal tilt angle for the solar panel
- Attended seminars to develop research skills like writing, data collection and learned about ethics in research
- Presented results at Summer Research Scholar conference at Manhattan College

Soft Robotics December 2015-September 2016 **Manhattan College**

Studying the nature of different materials and organisms to mimic their behavior in Robotics designs

EXPERIENCE

June 2017-September 2017 **Burke Medical Research Institute** White Plains, NY

Edwards lab, Research Intern

- Created a system in excel using VBA to collect patient information, forms, and to tally patient appointments that increased productivity and efficiency in lab
- Performed testing on new robots and their respective software for quality, comfortability and efficiency.
- Learned about noninvasive brain simulation methods for improving motor recovery of stroke recovery patients