

KENECHUKWU EMMANUEL EZEIFEEMEELU

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EDUCATION

NEW YORK UNIVERSITY, Abu Dhabi, United Arab Emirates **2023**

- B.S. (Hons.) in Mechanical Engineering, Economics (Minor) | **May 2023** | **GPA: 3.975/4.0**
- *Magna Cum Laude*, New York University Honors Scholar (Founders' Day Award)

LOYOLA JESUIT COLLEGE, Abuja, Nigeria **2019**

- West African Senior School Certificate Examination - WASSCE (SC) - **DISTINCTION** **May/ June 2019**
- SAT Math: 800/800, SAT Math II: 800/800, SAT Physics: 790/800 **Oct/ Nov 2018**

TECHNICAL SKILLS

Programming: Machine Learning, Anaconda, Python, MATLAB, HTML/CSS, C++.

Computational Modeling: CAD (AutoCAD, SolidWorks, Fusion 360), Finite Element Analysis (ANSYS, COMSOL)

General: MS Office Suite (Word, Excel, PowerPoint, Access), Research, Communication, Project Development.

RELATED WORK EXPERIENCE AND PROJECTS

Capstone Project – Optimization of Crumple Zones in Cars, Abu Dhabi, UAE. **Jan 2022 – May 2023**

- Developed optimized designs for longitudinal crash bars in vehicles, resulting in an estimated 9% cost and 16% weight reduction.
- Collaborated with other team members to investigate promising materials, fillings, and geometries for designs with greater specific energy absorption (SEA).
- Modelled CAD prototypes and ran ANSYS explicit dynamics simulations to select most promising prototypes.
- Performed physical compression experiments on prototypes using Instron Universal Testing Machine.

Solar Ship Inc., Toronto, Canada. **May 2022 – Aug 2022**

Remote Engineering Design Intern (Team Leader) Link: <https://sites.google.com/nyu.edu/peacesavinglives/project>

- Researched the use of solar-powered hybrid UAVs to tackle infant food insecurity in Arusha, Tanzania, resulting in a proposed increase of 1150 kg of food delivered per day.
- Mapped 4 different flight paths between points of needs and areas of agricultural surplus, taking into consideration nutritional needs, seasonal wind patterns and geography.
- Drafted technical requirements for feasible operation including maximum payload weight and UAV cruise speed.
- Presented solution to chief executives of Solar Ship Inc. with comprehensive Electronic Press Kit.

Computational Solid Mechanics Lab, Abu Dhabi, UAE. **Jan. 2022 – July 2023**

Research Assistant Website: <https://www.computational-mechanics.org/>

- Assisted professor and postdoctoral research associate with the development of a neural network to optimize run-time for non-linear computational mechanics.
- Created stiffness optimization program using Python and ANSYS interface for complex FEA models.
- Designed ANSYS models to analyze load path across honeycomb structure at different orientations.
- Developed Python program to create randomized solid geometries for damage propagation study.

OTHER INITIATIVES

Volunteer, Special Needs Adaptive Program (SNAP) – Basketball, Abu Dhabi, UAE **Jan 2023 – May 2023**

- Participated as a volunteer mentor in bi-weekly basketball program in which university students teach basketball skills to special needs children in the UAE.

Resident Assistant, NYU Abu Dhabi Student Affairs Office, Abu Dhabi, UAE **Aug 2020 – May 2023**

- Managed shared resources, event, and facilities for a residential community of over 450 students.

AWARDS & ACCOMPLISHMENTS

- West African Senior School Certificate - WASSCE (SC) National Distinction Award, *Nigeria*. **2019**
For being Second Overall Best (2nd Position) out of 1,590,173 students nationwide.
- Finalist in the Interswitch SPAK Science Competition out of 11,412 participants nationwide, *Nigeria*. **2018**
- Third Position in the Interswitch Group Innovation Challenge, *Nigeria*. **2018**
- First Position in the Junior Mathematics Olympiad (National Level), *Nigeria*. **2016**