KENECHUKWU EZEIFEMEELU

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# EDUCATION

**New York University Abu Dhabi**, Abu Dhabi, United Arab Emirates **Exp Grad: May 2023**

* **Bachelor of Science in Mechanical Engineering, Economics (Minor)**
* **Current GPA: 3.99/4.0**
* **Relevant Coursework**: Finite Element Analysis; Numerical Methods; Partial Differential Equations; Modeling and Analysis of Dynamical Systems; Machine Design; Design and Innovation; Essential Python (LinkedIn Learning); Training Neural Networks in Python (LinkedIn Learning)

**Loyola Jesuit College**, Abuja, Nigeria **July 2019**

* 2nd in Nigeria, 2019 West African Senior School Certificate Examination **(**out of 346,098 students**)**
* SAT Math: 800/800, SAT Math II: 800/800, SAT Physics: 790/800

# TECHNICAL SKILLS

**3D Design and Manufacturing:**

* CAD (AutoCAD, SolidWorks, Fusion 360).
* FEA Software (ANSYS, COMSOL).

**Programming Languages:** Python, MATLAB, HTML/CSS, C++.

**Others:** MS Office Suite, Research, Project Development and Management.

# RELATED WORK EXPERIENCE

**Computational Solid Mechanics,** NYU Abu Dhabi, UAE **Jan. 2022 – Present**

*Research Assistant*

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

* Created stiffness optimization program using Python and ANSYS interface for complex FEA models.
* Designed ANSYS models to analyse load path across honeycomb structure at different orientations.
* Developed Python program to create solid geometries with randomly generated holes for damage propagation study.

**Vijay Lab - Heatsink Lattice Optimization**, NYU Abu Dhabi, UAE **Apr 2021 – Aug 2021**

*Research Assistant*

* Researched the use of TPMS lattices to improve heat transfer efficiency in micro-scale heat sinks.
* Developed computational fluid dynamic (CFD) models for promising structures and documented each model’s performance using the derived pressure drop and Nusselt number.

# PROJECTS

**Capstone Project – Optimization of Crumple Zones in Cars**, NYU Abu Dhabi **Jan 2022 – Present**

* Investigated properties of promising materials, fillings, and geometries to result in designs with greater energy dissipation and crash resistance stiffness.
* Ran explicit dynamics simulations on CAD prototypes using finite element analysis software, ANSYS to select most promising prototypes for physical experimentation.

**Automobile Heat Exchanger Design**, NYU Abu Dhabi **Sept 2022**

* Designed the schematics for an automobile air-cooled tube-fin heat exchanger with an Ethylene Glycol 50:50 coolant, following ASTM standards.
* Modified design using MATLAB scripts to improve heat transfer rate, fin efficiency and effectiveness.
* Conducted off-design performance analysis at ambient air temperatures outside the conventional range.