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.