

# BAMIDELE AROBOTO

BOSTON City, MA | [atbami@bu.edu](mailto:atbami@bu.edu) | +1(857)-313-1715 | [linkedin.com/in/bamidele-aroboto](https://www.linkedin.com/in/bamidele-aroboto)

## EDUCATION

---

### ***Boston University (BU)***

Boston City, MA

#### **Ph.D. in Mechanical Engineering**

Recipient of BU Mechanical Engineering Distinguished Fellowship

Sep2022-Till Date

Courses: Machine Learning, Kinetic Processes in Materials, Thermodynamics and Statistical Mechanics, Advanced Fluid Mechanics

### ***University of Lagos (UNILAG)***

Lagos, NGA

#### **Bachelor of Science in Mechanical Engineering**

GPA: **4.52/5.00**

Courses: Introduction to Python Programming, Heat Transfer, Fluid Mechanics, Energy Sources and Utilization  
Jan 2015 – Nov 2019

## RESEARCH/INDUSTRY EXPERIENCE

---

### ***Doctoral Research Fellow*** – Boston University (**Boston, USA**)

Sep. 2022-Present

- Combining molecular dynamics simulations of disordered materials with physics-informed multi-scale Machine Learning
- Autonomously and intelligently extracting critical structural descriptors for a given property target of a disordered material
- Utilizing these descriptors/features for on-the-fly tailoring of complex structure-property relationships

### ***HVAC Design Engineer-*** MAR&MOR Engineering Ltd (**Lagos, NG**)

Mar. 2022 - July. 2022

- Collaborated with cross-disciplinary teams to develop a project schedule for the design of Daikin Variable Refrigerant Volume (VRV) systems in various luxurious buildings
- Provided analytical and problem-solving support by proffering solutions to client-specific situations in terms of design

### ***Mechanical Design Engineer*** - Alph4Mep Ltd (**Lagos, NG**)

Jun. 2020- Feb. 2022

- Used Computer-Aided Design software and Revit 2021 to design Mechanical systems in Residential, Commercial and Industrial Buildings
- Consulted with vendors to obtain Mechanical systems of good quality and the most cost-effective equipment to make the company profitable
- Coordinated with my teammates and other teams to ensure the smooth operation of daily activities, which boosted employee morale
- Designed Variable Refrigerant Flow (VRF), Water and Sewage Treatment Plants, Plumbing, and Fire Fighting Systems in Residential, Commercial and Industrial Buildings

## PROJECTS

---

### *Autonomous and Intelligent Multiscale Extractions of Descriptors (AIMED)*

2023

Supervisor: Prof. James Chapman (BU)

- Incorporating molecular dynamics simulations of disordered materials with physics-informed multi-scale machine learning to autonomously extract critical structural descriptors for a given property target. These features will then be used to better understand how local and long-range structure gives rise to certain material responses, allowing for on-the-fly tailoring of complex structure-property relationships

### *Reactivation and Characterization of a Gardner Diesel Engine*

Mar. 2019 - Nov. 2019

- Redesigned the water-cooling system of an existing Gardner Diesel Engine by fabricating a new water tank with a high surface area to aid heat transfer so that the engine could provide a more accurate result

## Skills

---

**Software:** Python, PyCharm, C/C++, LAMMPS, Ubuntu, Microsoft (word, presentation and excel), Ovitto, MATLAB

**Modules/Libraries:** Pandas, Matplotlib, Numpy, Sklearn, Pytorch, Pytorch Geometric, Atomic Simulation Environment

**CAD Tools:** AutoCAD, SolidWorks, Revit, Autodesk Inventor

## NOTABLE AWARDS

---

- Recipient of BU Mechanical Engineering Distinguished Fellowship 2022
- Dansol High School Mathematics Competition Winner – 2013
- The UNILAG Dean's Award 2017-2019
- UNILAG Endowment Scholarship 2019