

AYOBAMI FAITH SONIBARE JR.

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RESEARCH INTEREST

Enhancing and Optimization of Additive Manufacturing Process and Material Design through Graph Neural Networks (GNNs)

EDUCATION

B.Eng., University of Ilorin, Ilorin, Nigeria

04/2016 – 12/2022

Department of Materials and Metallurgical Engineering; CGPA: 3.55 / 5.0

PROJECT EXPERIENCE

ML Collective *remote*

Independent Researcher

05/2024 – Present

Research focus: Exploring the Potential of Graph Neural Networks (GNNs) for Predicting Material Failure due to Defects in Complex Hierarchical Materials.

University of Ilorin

Ilorin, Kwara State, Nigeria

Undergraduate Student Project

08/2020 – 01/2022

Project Topic: Performance Evaluation of Al-Cast Rice Huller Lower Sieve Holder and Lower Sieve Holder Support

- Investigated the reason for the scarcity of both the components in the market and the result of the investigation was due the high cost of production using cast-iron;
- Designed, fabricated both components using Al-Cast and carried out performance evaluation tests on both.

WORK EXPERIENCE

Metallurgist/Materials Engineer

09/2024 – Present

Innov8 Hub, Abuja, Nigeria

- Recommending material selection for fabrication in the Technical and Vocational department;
- Involving in the research and development of technological projects with the welding and fabrication team;
- Providing technical design advice thereby reducing material wastage significantly by 30% and achieving the desired output and productivity of the team within a very limited time constraint.

Computer Science and Data Processing Instructor

06/2023 - 04/2024

National Youth Service Corp, Anambra, Nigeria

- Taught the basics of computer science and data processing to 13 different stages of high school students with an average of 50 students per class;
- Implemented an Excel database to record student's tests and exam scores. facilitating easy access to student details and significantly streamlining the process of marking and recording exam scripts by 30%.

Industrial Trainee

06/2020 – 12/2020

Radius Technical Company LTD., Lagos, Nigeria

- Designed cutting patterns, using AutoCAD, for a CNC plasma cutting machine;
- Involved in the welding and fabrication of cylindrical and cubic fuel storage tanks, flat-bodies for trailers;
- Provided technical design advice and counsel for the Technical Design Team, reducing redundancy and improving the output and productivity of the department significantly by 50%.

SKILLS

- **Materials Analysis and Selection:** Skilled in analyzing engineering materials properties and recommending for usage in fabrication and manufacturing;
- **Additive Manufacturing Techniques:** Extensive knowledge in Material Extrusion, Binder Jetting, Material Jetting, etc.;
- **Machine Learning:** Self-taught and proficient in using Python programming for designing and training ML models specifically for predictive analysis using numpy, pandas, scipy, matplotlib, etc. libraries and tensorflow, pytorch frameworks;
- **CAD:** Extensive experience in creating 2D engineering layouts and patterns using AutoCAD as well as 3D models using Solidworks and Fusion360

SELECTED COMMUNITY SERVICES

Community Development Service, NYSC Actively engaged in the CDS exercises during my 1-year National Youth Service, which involves visiting orphanage homes with food items, sanitizing community roads and markets, and providing career path sensitization for over 1000 high school students. Any of these activities is conducted weekly. *(06/2023 – 04/2024)*;

Campus Lead, Undergraduate Tutorials, UNILORIN Helped fellow and younger undergraduates in the Faculty of Engineering grasp the concept of major courses by organizing after-school-hours tutorials *(2018 - 2021)*.

Updated in: November, 2024