

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* 05/2024 – Present
Independent Researcher, currently in the process of publishing my first article;
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

Computer Science and Data Processing Instructor 06/2023 - 04/2024
National Youth Service Corp
• 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 Characterization:** Skilled in analyzing engineering materials properties;
- **Additive Manufacturing Techniques:** Extensive knowledge in Material Extrusion, Binder Jetting, Material Jetting, etc.;
- **Python Programming:** Self-taught and proficient in using Python for computation, data processing and automation;
- **Data Science and Data Analysis:** Adept in using NumPy, Pandas and Matplotlib libraries for data presentation, and visualization. Experienced in data science methodologies and techniques;
- **Machine Learning:** Capable of designing and training ML models specifically for predictive analysis;
- **AutoCAD Design:** Extensive experience in creating 2D engineering layouts and patterns;
- **SolidWorks:** Competent in simulating portable engineering structures and workflows.

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).