Obinna Gerald Azike
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Education

Bachelor of Applied Science, Mechanical Engineering and Entrepreneurship Management Option

- University of Ottawa, ON 2013-2018
- University of Ottawa Entry Scholarship of $12,000
- Graduation date: June 13, 2018

Available to work immediately and able to relocate

RELEVANT SKILLS, EXPERIENCES AND ACCOMPLISHMENTS

Technical Skills

- Research and analytical skills developed from numerous group projects.
- Wrote multiple engineering and laboratory reports and reviewed formal engineering documents, including project proposals.
- Designed multiple project using Solidwork and familiar Catia and AutoCad.
- Conducted FEA for several load cases on simple beams, I-beams and C-channels to obtain the stress distributions and beam deflections using ANSYS 18.0 Workbench
- Analyzed and evaluated thermodynamic processes such as; compression, turbine power generation, pumping, heating, cooling and de-/humidification of air.
- Created C++ and MATLAB codes to execute programs requiring the use of loop statements, functions and arrays.
- Knowledge in classical and modern control of state-feedback systems within MATLAB and SimuLink.
- Knowledge of file management, file compression and file indexing.
- Proficient and comfortable in the use of Microsoft Office/Excel.
- Knowledgeable with in use of 3D printing.

Communication Skills

- Fluent in English – Oral, Reading and Writing
- Collaborated in a multidisciplinary group of students to complete various design projects.
- Delivered weekly PowerPoint presentations with updates about ongoing design projects to the lead engineers.
- Participated in several group projects which included preparing technical reports and oral presentations.

Working Experience

Platform Insurance Broker Limited Lagos, Nigeria.
Internship at the Risk Management Department.
Summer 2014

Assessing risk form new businesses/clients. Duties included; Visiting various establishments to formulate pre-loss surveys. Assessing all potential risks within potential businesses and creating an overall insurance slip to be used to determine premiums paid.

Internship at the Claim Processing Department.
Summer 2017

Worked in the claims department. Duties included; dealing with claims, assisting in assessing the severity and quantum of the claims and preparing a claim notification report to insurance company for processing the claim.

Applied Projects

Design of An All Terrain Vehicle (09-12/17)

- Designed and analyzed an off-road vehicle for a Baja race that will survive the severe punishment of a rough terrain.
- Created a parametric design system to deal specifically with heavily mudded tracks.
- Successfully created parametric design of the chassis suspension and the steering, and provided appropriate anchor points for the engine, the transmission, electrical components and the wheel hub.
- As a group, we designed all components from the Briggs and Stratton 10hp OHV Intek engine shaft to drive the wheel inclusively as well as designing the brakes and front wheel assembly.
- Designed a transmission that allows for a forward and reverse motion of the ATV.
- The use of engineering sketchbooks and Solidworks were essential for the creation of this idea.
- Matlab was also integrated to simulate the proposed design and make it parameterizable.

Snow Blower Gear Reducer Design (01-04/16)

- Developed lateral offset gearbox with detailed specifications.
- Evaluated the stresses, shaft and safety factors while making proper design and engineering assumptions.
- Successfully Integrated through a computational fluid dynamics program to produce a graphical representation of related stress points in the shaft and design.

Battery Swap Station Design for E-Formula One Cars (09-12/15)

- designed a battery swap station that replaced the old method used for battery swapping in formula E racing cars.
- Presented a problem and without assistance we used various problem solving techniques to design a solution.
- The machine was able to swap batteries from the bottom of the car and replace it with a fully charged battery in an autonomous operation.
- Used SolidWorks to design every aspect of the swap station while adhering to specific dimensional guidelines.
- Integrated through a Matlab computer program to simulate the proposed design and to identify suitable linkages and mechanisms to satisfy the design requirement.

Quadcopter Drone Manufacture and Design (09-12/15)

- Intensive research to ensure a unique design is created and materials are available in the market or can be sourced locally.
- Introduced a multisim electrical circuit design program to stimulate the electrical control system of the quadcopter aided by the use of a Naza-M V2 flight controller.
- Successfully modelled the quadcopter design using SolidWorks computer program.
- Reduced material cost by 40% by manually manufacturing the quadcopter landing gear using 3D printers, by personally analyzing the Arduino program code, or removing redundancies which resulted in a smaller board and microprocessor being used.

Extra-curricular activities

Intramural Soccer September 2012-December 2017

- Captain of several intramural soccer teams throughout my time at university, which strengthened my leadership and teamwork skills.