Dr Abbas Egbeyemi

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EXPERIENCE

DESIGN ENGINEER, ETHER NDE LTD. UK – 2019 - PRESENT

- In charge of developing and optimising the algorithms used in products we manufacture, that measure material properties such as conductivity, part thickness, and coating thickness. Techniques applied include curve fitting and machine learning.
- Involvement in multiple external collaborative projects where eddy current technology is incorporated into various manufacturing processes, such as 'SEAMLESS', where a conductivity measurement sensor is used for measuring the surface roughness of manufactured parts, and 'Em-Rest', where eddy current probes are used for the measurement of residual stress in parts created using additive manufacturing.
- Technical contact with whom potential clients with bespoke requirements can discuss specifications, and receive advice on the best ways to implement our technology to meet their needs.
- To manage product testing, and ensure the stability, and accuracy of pre-release products, and to assess their market readiness.
- I expanded my responsibilities to include the duties of a software engineer in which I developed a fully featured multi-platform eddy current C-scan image analysis desktop application.
- I also wrote other software used for the conduction of experiments, and the visualisation of experimental data.

FINITE ELEMENT ANALYSIS CONSULTANT – JUL 2018 - DEC 2018

- Created finite element (FE) models of electromagnetic acoustic transducers (EMATs) explaining the interaction between EMATs and electrically conductive materials containing residual stress.
- Compiled and presented the results of the models to project partners in ways that are illustrative and easy to understand.

EDUCATION

- University of Warwick, UK - EngD, Physics (2018).
- University of Sussex, UK - MEng, Electrical and Electronic Engineering (2014) - 1st Class Honours.

SKILLS

- Software development - Multiple desktop software written in C# using the MVVM pattern, and Python using PyQt5, Qt QML, and deployed to Windows and macOS.
- Front end web development - HTML, CSS, JavaScript, React, GraphQL.
- Back end web development - Django, Flask.
- Data mining - Experience with data extraction from XML and HTML files to be compiled into Pandas dataframes.
- SQL - Sqlite and PostgreSQL.

- Finite Element Modelling - Excellent working knowledge of finite element modelling, with extensive experience with creating electromagnetic, and solid mechanics FE models, using COMSOL Multi-physics.
- Data visualisation and analysis - Extensive experience with using MATLAB, Pandas, matplotlib for data processing, data presentation, and visualisation.
- Computer Aided Design - Experienced at carrying out design, and structural creations using Solidworks, for 3D printing and modelling.
- Electronics - Experience with Multisim for circuit design, Eagle for printed circuit board design, LabView and VISA for microcontroller, and instrument control.
- Office Tools - Daily use of Microsoft Word, and LATEX (reports and publications), Microsoft PowerPoint (conferences and departmental presentations), Microsoft Excel (data analysis).

POSITIONS OF RESPONSIBILITY

MENG PROJECT GROUP LEADER (UNIVERSITY OF SUSSEX) (2013 - 2014)

- Defined the project objectives, time scales and constraints with the help of my team.
- Utilised tools such as Gantt charts and budget forms, for monitoring and documenting progress.
- Managed the funding and resources provided by the university, applied cost management, and time management techniques.

TEAM V LEADER (VINSPIRED) (2013 - 2014)

- Led a team of fellow volunteers in running campaigns in raising awareness on issues affecting young people all over the United Kingdom. Campaigns that were ran included spousal abuse awareness, recycling and global warming.
- Successfully organised and ran an up-cycling fashion show to bring awareness to recycling old clothes to reduce waste, and an event for teenagers at a local young people's shelter.

AWARDS AND GRANTS

- 2010 - 2014 - Chancellors International Scholarship (£12,000).
- 2010 - 2014 - Department of Engineering award for the best student in the foundation year (£16,000).

PROFESSIONAL MEMBERSHIPS

- Member of the British Institute of Non-destructive Testing.
- Member of the Institution of Engineering and Technology.