Mohammed Hassan Rasheed *B.Eng (Hons)*

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Profile:

A knowledgeable and performance driven Engineer with a good academic track record and passionate about coding and development. Demonstrates a great understanding of C, FPGA verification processes, circuit analysis and modelling, hardware and software integration testing.

Employs an analytical, data-focused approach to problem solving, identifying and delivering solutions to the most complex tasks. Able to explain complicated technical concepts to colleagues and users at any ability level, both verbally and in the production of documentation. A dependable, motivated professional with excellent communication and interpersonal skills who integrates well into dynamic teams and can work individually with minimal supervision.

Now looking for a Software Developer position to deliver significant and measurable value to an organisation.

Key Achievements:

- Verification of Falcon 7X Generator Control Unit FPGA to demonstrate the compliance of the design updates
- Creation of a circuit model of the A380 feeder cable to perform simulation,
- Recognition for outstanding work by being granted the Platinum Award and the Silver Award

Key Skills:

Programming Languages:
Intermediate level: C, VHDL, MATLAB, 8051 Assembly
Basic Level: Excel VBA, Python, SQL
Software Systems:
Advanced level: ModelSim, Multisim, SIMetrix, LTspice
Intermediate level: ADS, Labview, NI Elvis, DOORS Requirement Capture, Synplify Pro, Altium
Experience using Arduino and FPGA (Xilinx, Altera and Microsemi)
Hardware Skills:
Oscilloscope, Spectrum Analyser, Soldering
Business Skills:
Communication, Presentation, Negotiation, Analytical, Adaptive, Project Management, Stakeholder Engagement, Fast Learner

Employment Overview:

Support Desk Engineer, Cobham Wireless, August 2016 – Present

A global leader in the provision of advanced wireless coverage and mobile communications systems.

- Supporting customers with technical issues across the DAS (Distributed Antenna System) product line
- Responding to requests for technical assistance in person, via phone, electronically
- Diagnose and resolve technical hardware and software issues

Graduate FPGA Engineer, Safran Power UK (Labinal Power Systems), January 2014 – February 2016

Labinal Power Systems is a global leader in aeronautical power and electrical systems. An expert in the entire on-board electrical power chain, and the active representative of Safran in the area of the "more electric" aircraft.

As part of the graduate scheme, completed a program of placements throughout the company including: Firmware, Programs, Quality, Operations and EMC (Electromagnetic Compatibility)

FPGA Design Placement – Design Engineer for Sikorsky CH53 Project:

- Maximised the performance and productivity by:
  - Modifying VHDL code for gate reduction.
  - Improving gate count by modifying Synplify synthesis and Libero place and route switches for Microsemi (Formerly Actel) ProASIC3e devices.

FPGA Verification Placement – Verification Engineer for Falcon 7X BC FPGA Project:

- Updated the simulation test plan and report to correct the verification steps.
- Developed test cases for the Falcon FPGA verification in accordance with D0-254.
- Performed Functional and Post-Layout Simulation on ModelSim using TCL script.
- Generated HECI (Hardware Lifecycle Configuration Index) report.

EMC Placement – Shadowing

- Learnt how a complex power system is tested for EMC (Electromagnetic Compatibility).
- Gained basic understanding of the standards applicable to EMC compliance testing.

Operations Placement – Manufacturing Engineer:

- TPM (Total Preventative Maintenance) Project: Introduced a new template for the TPM Checklist, Creating a TPM Register and TPM Checklists for majority of the equipment present on site.
- Utilised QRQC (Quick Response Quality Control) to solve production issues in Manufacturing.

Quality Placement – Quality Engineer:

- Compiled Customer Audit Checklists
- Carried out Internal Audits
- Managed multi-projects Labelling for Spares DOD and Critical Parts Projects

Assignments carried out in other departments:

- Performed circuits' simulation with SPICE to ensure the design requirements were met.
- Conducted the common mode and dissimilarities analysis for the generator and ground power control unit of A380/A400M.
- Created a circuit model of the A380 feeder cable configuration and performed over 100 circuit simulations of various fault scenarios.
- Contributed to the development of a STEM booklet.

Application Engineer (Temporary Position), Pragmatic Printing, October 2013 – November 2013

PragmatIC is a world leader in ultra-low cost flexible electronics and the pioneer in imprinted electronic logic. It designs and manufactures electronic logic circuits that introduce intelligence and interactivity into a wide range of products and applications.

- Designed, built and debugged circuits: conducted device characterisation and testing, as well as device modelling and circuit design.
- Developed prototypes including construction of equivalent circuits and functional prototypes.
- Conducted a variety of data analysis.
- Wrote technical reports describing the electrical performance of devices from different wafers under various conditions.

Customer Service Volunteer, British Heart Foundation Electrical Shop, July 2012 – August 2012

- Spoke to customers on the phone about online booking for collection of items
- Ensured that every customers' request was investigated and resolved at the time of call
- Resolved inbox and voicemail enquiries, ensuring each enquiry was logged and reporting workload completed with regular hourly updates on performance
-

Education and Training Qualifications:

B.Eng Electrical and Electronic Engineering, 2.1, Queen Mary University of London, 2010 – 2013
Modules included: *Electronic Devices and Applications (Analogue Circuit Design), Digital Systems Design, Microprocessor Systems Design, Integrated Circuit Design, Programming Fundamentals (C programming), Communication Systems Electronics (RF Design), Circuit Design and Applications (Analogue Circuit Design), Digital Signal Processing.*

Second Year Group Project (Built Electronically Controlled Micro-greenhouse using Arduino)
Sourced components, designed and built all the sensor circuits as well as for the Nichrome wire heater circuit.

Final year Individual Project (Built a MATLAB model of Cognitive Radio using a buffer with random interruptions):
Applied M/D/1 FIFO scheme to build a simple MATLAB model with and without interrupted channel. The channel was interrupted to model the effect of primary users on the secondary users.

A Levels, Mathematics B, Physics and Chemistry C, Lampton School, 2008 – 2010

5 GCSEs, including English & Mathematics, West Thames College, 2006 – 2008

- *Focused on continue professional development: currently studying Python Masterclass and Java Masterclass on Udemy*
- *July 2015: Comprehensive VHDL Course (5 days) – Doulos*
- *May 2015: White Belt Training – Safran Power UK*
- *May 2014: Communication & Presentation Skills Training – Amaze Consulting*
- *May 2014: Continuous Improvement Training – Safran Power UK*
- *June 2014: Audit Awareness Training – Safran Power UK*

Interests:

- Enjoy playing cricket and doubles badminton.
- Reading technology and business news to keep me updated