NAKUL KRISHNAN

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ELECTRICAL ENGINEER

Motivated electrical engineer with hands-on experience in FPGA system verification and basic programming, complemented by a strong foundation in electrical design, systems engineering, and requirements analysis. Eager to transition into an entry-level FPGA engineering role, leveraging my current work on FPGA testing at GE Aerospace and core skills in digital electronics to contribute to innovative hardware development projects. A quick learner with a passion for FPGA technologies, committed to expanding my expertise in design, implementation, and verification while delivering value in dynamic, high-tech teams.

CORE COMPETENCIES

- ✓ Working towards chartered status (CEng.)
- ✓ Automotive electrification experience
- ✓ Nuclear Industry Experience
- ✓ Aerospace Industry Experience
- ✓ Well experienced in schematic design
- ✓ Systems Engineering
- ✓ Requirement Analysis
- ✓ Good inter-personal working skills with team mates
- ✓ Team leading skill
- ✓ Resilience & professional integrity
- ✓ FPGA verification tests
- ✓ Basic MATLAB & Simulink experience
- ✓ Basic Finite Element Analysis in COMSOL
- ✓ Power electronics knowledge
- ✓ Basic FPGA programming skills
- ✓ Basic understanding of analogue and digital electronics circuits

PROFESSIONAL EXPERIENCE

POWER HARDWARE SYSTEMS DESIGN ENGINEER

November 2022 - Present

GENERAL ELECTRIC (GE) AEROSPACE, CHELTENHAM, UK

- Working on New Product Introduction (NPI) projects focused on Primary Distribution Systems (PDS), authoring test plans to verify circuit designs in compliance with ARP4754 standards.
- Performed in-depth requirements analysis for subsystems and components, ensuring full traceability across development lifecycle.
- Developed test plans for Environmental Stress Screening (ESS) of electrical cubicles to maintain integrity under extreme conditions, adhering to DO-160 standards.
- Authored test reports for DC Content Modules, analysing electronic schematics to validate AC detection in DC signals via external interfaces.
- Conducted FPGA system verification using test rigs and oscilloscopes, post-processing results to confirm alignment with customer requirements and design specifications.
- Completed GE electronics lab training on handling sensitive boards to prevent Foreign Object Debris (FOD) and Electromagnetic Interference (EMI).
- Applied lean manufacturing principles including 5S, Kaizen, Kanban, and Daily Management to optimize project workflows.
- Contributed to community volunteering initiatives, such as pathway cleaning, park maintenance, and tree planting in the Cheltenham area.

ELECTRICAL SYSTEMS ENGINEER, REMOTE APPLICATIONS **July 2019 – November 2022**
UNITED KINGDOM ATOMIC ENERGY AUTHORITY, CULHAM, UK

- Designed and delivered electrical schematics using SolidWorks Electrical for cubicles powering and controlling robots in nuclear fusion environments.
- Generated engineering manufacturing drawings in SolidWorks to facilitate cubicle production.
- Prepared Bills of Materials (BOM) in SolidWorks for efficient procurement processes.
- Developed commissioning procedures and inspection plans for designed cubicles to ensure operational readiness.
- Managed electrical work packages across multiple projects, overseeing timelines and deliverables.
- Provided line management and mentorship to year-in-industry students and graduate electrical engineers, fostering skill development and team performance.

POSTGRADUATE ENGINEER, ELECTRIFICATION RESEARCH **August 2018 – May 2019**
JAGUAR LAND ROVER, COVENTRY, UNITED KINGDOM

- Worked towards integrating a new wireless inductive charging method for Jaguar Land Rover cars.
- Generated excellent Concept- Failure Mode & Effects Analysis (C-FMEA) on wireless inductive chargers in ENOVIA PLM software.
- Developed business case to justify the economic value and potential revenue generation of the project.
- Conducted requirement analysis of the wireless chargers which includes, internal/external customer, functional safety and system design specification requirements, entered in IBM DOORS.

PROJECT ASSOCIATE, DEPARTMENT OF ELECTRICAL ENGINEERING
INDIAN INSTITUTE OF TECHNOLOGY MADRAS, INDIA **July 2016 – August 2017**

- Developed an online water quality monitoring system, which automatically measured turbidity of water.
- Created a working model from scratch based on the principle of light reflection in water using a laser and a colour sensor.
- Ensured that the final system met the customer requirements and was able to function well.
- Developed a DC pump system to route the water to different tanks at a set time using a timer circuit.
- Microcontroller programming and basic PCB circuit design
- Worked a bit on Finite Element Analysis using electromagnetic module in COMSOL software

EDUCATION & QUALIFICATION

MSc. ENERGY AND POWER SYSTEMS ENGINEERING **August 2017 – July 2019**
UNIVERSITY OF LIVERPOOL, UNITED KINGDOM
GRADE: 2:1

B.Eng ELECTRICAL AND ELECTRONICS ENGINEERING **June 2012 – July 2016**
ANNA UNIVERSITY, CHENNAI, INDIA
GRADE: First Class

WORK PERMIT STATUS

Settled status (Indefinite Leave to Remain) - No visa sponsorship required

Linked-IN profile
https://www.linkedin.com/in/nakulkrishnan/