





Raghul Mohankumar, P.Eng

Electrical Engineer

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 [Click here for LinkedIn Profile](#)

 [Click here for Portfolio website](#)

An active electrical engineer with 12 years of extensive technical experience in competitive and international context.

I have Professional Engineer (P.Eng) License from EGBC

Proven ability to drive projects safely, efficiently, and within budget while maintaining a strong commitment to health and safety.

KEY SKILLS

- Project management
- Variable Frequency Drives
- Cable Sizing
- Lighting Design
- Electrical Circuit Design
- Wiring Harness Design
- Value Addition / Value Engineering
- BOM Creation
- Product Analysis & Development
- Hardware Testing
- Risk Analysis
- FRACAS & DFMEA
- Product Data Management
- Product Life-cycle management
- Components Selection
- Product change management

ACHIEVEMENTS

- KONE Innohack Finalist
- KONE Extra Miler Award



EDUCATION

2021 - 2021

Master's Degree in Electrical Engineering,
University of New Brunswick.

 Fredericton, NB, Canada

2013 - 2015

Master's Degree in Business and Administration,
Anna University.

 Chennai, TN, India

2008 - 2012

Bachelor's Degree in Electrical & Electronics Engineering,
Anna University.

 Chennai, TN, India



PROFESSIONAL EXPERIENCE

2022 - 2024

MINESENSE TECHNOLOGIES LIMITED



Intermediate Electrical Engineer (August 2022 to Till date)

 Vancouver, BC, Canada

- Designing and specifying electrical and controls system components and circuits in 3D tools
- Troubleshooting the issues in existing electrical components and systems
- Defining the requirement, configuration, point to point connections and list of components of each wiring harness
- Supporting and troubleshooting the manufacturing and assembly issues during prototyping and production stages
- Bench calibration and verification of sensors, actuators, and electronic components
- Collaborating with vendors and suppliers to ensure proper manufacturing of the designed assemblies
- Developing and performing validation tests at system and sub-system levels
- Generating design documentation, drawings, schematics, manufacturing files and bill of materials using ERP




REDLEN TECHNOLOGIES INC



2022 - 2022

Product Engineer (Feb 2022 to June 2022)

 Victoria, BC, Canada

- Implement validation plans to meet customer requirements and develop validation test reports for each customer.
- Participate in engineering design reviews, develop a validation plan, and improve test coverage to reduce incidence.
- Manage field returns, perform root cause analysis, identify corrective actions, report issues, and assist in debugging.
- Develop software for data analysis and visualization, systems for the storage and processing of detector data.
- Create documentation relating to verification plans, test system setup and usage, and test system software.



KONE CORPORATION



2014 - 2021

Senior Engineer (October 2018 to February 2021)

 Chennai, TN, India

- Managing the engineering change requests (ECN & CR) in Electrification Architecture by driving and implementing actionable and targeted change management plans for prototyping and piloting at production and field respectively.
- Perform change impact assessments for potential risks and plan to mitigate the risks.
- Strategise with key stakeholders such as mechanical design team, suppliers and production managers for driving and executing the change requests throughout the various stages of product change management.
- Defining the project requirements and specifications, and assigning the tasks to the engineers after relevant training to deliver the project as per the timeline and schedule.
- Execution of Change Request steering discussion with other stakeholders to drive the change requests with sequential approval milestones.
- Driving the electrification projects according to the revisions of safety and regulatory standards within the budget constraints.
- Analysis of the quality feedback reports from the field and providing technical solution accordingly.
- Upgrade design of existing system based on corrective actions, code requirement, offering improvement, quality or reliability improvements.
- Performing the design reviews, DFMEA, Risk analysis and maintain corresponding reviews.



SOFTWARE SKILL SET

- AutoCAD Electrical
- EPlan P8
- Harness ProD
- ETAP
- MATLAB & SIMULINK
- OrCAD Capture PCB
- Editor & Pspice
- MathCAD
- VariPDM & Variclient
- EngCalc
- SAP
- R Programming
- Source Insight
- Microsoft office tools



PERSONAL TRAITS

- Self-Motivation towards the goal
- Fast Learner & Innovative
- Effective Communication
- Self-discipline
- Multiple task handling
- Brainstorming
- Time Management
- Task Prioritisation



LANGUAGES KNOWN

- English
- Tamil
- Telugu



HOBBIES



Electrical Engineer (July 2014 to September 2018)

Chennai, TN, India

- Electrification Design includes the wiring circuitry & harness schedule for various modules using Auto-CAD for the electrification according to the performance standards (IEC / IS) .
- The Component Selection includes Switchgear, Electrical Machines, Cable and sizing, Electrical Drives, Actuator Switches, LEDs, LED Drivers, Load Weighing Sensors, etc. based on the product configurations, engineering calculations, application of theory and performance standards.
- Creation, revision and documentation of the circuit drawings, wiring harness, controller manual, operational sequence, product descriptions, bill of materials, etc. based on the product parameters.
- Prototyping & Piloting of the electrical system in the simulators, In-House & Field with systematic commissioning.
- Creation of bill of materials, item masters and product structure database in the Product Database Management software.
- Developing the conceptual and optimal design of new products based on specifications, vendor selection, cost competency, quality and energy efficiency according to the market requirements.
- Performing the change management activities such as Product Cost Reduction, Market Indigenisation, Localization & Customization.
- Maintaining and updating product quality documentation for product installation, maintenance and specifications.
- Quotation enquiry study, Costing workout and costing comparisons based on the bill of materials and commercial requirements.
- Analysis of supplier manufacturing processes and conveying the critical to quality parameters to validate quality and resolve technical issues at supplier end.
- Root Cause Analysis for the Electrical components Failure in the user-end based on the feedback from the frontline & appropriate drawing modification to overcome the failure.
- Analysis of design validation feedbacks of the product through various tools such as FRACAS, etc. for the further improvement iteration of the product.
- Calculation of energy consumption for the electrical system in both Standby Mode & Operational Mode for the design of the energy efficient products.
- Calculation and analysis of Early Failure Rate (EFR) over the rolling period of time to increase the level of quality of the products present in the market.
- Providing product support for Testing, Manufacturing, Sourcing, Quality & other cross functional business units.



PROFESSIONAL EXPERIENCE

2012 - 2014

TATA ELXSI LIMITED



Engineer (July 2012 to July 2014)

Bengaluru, KA, India

- Validation of the System Prototype according to the Specifications & the Functionality of the Devices
- Validation and Verification includes White Box Testing and Black Box Testing based on the Set Top Box Ideal Functionalities.
- Testing for Reliability, UI improvement, everyday usability, Regression, better performance of Motorola Embedded Wireless Devices.
- The hardware testing involves the application software developed for hand held mobile devices is tested for its functionality, usability and consistency.