

Raghul Mohankumar

Electrical Engineer

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 Click here for LinkedIn Profile

 Click here for Portfolio website

An active electrical engineer with 8 years of extensive practical and technical experience in a competitive and international context.

Analytical and professional specializing in new product development and engineering change management of electrical architectures.

KEY SKILLS

- Components Selection
- 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
- Supplier Selection & Follow-up
- Product Life-cycle management
- Product data management
- Product change management

ACHIEVEMENTS

- Tata Elxsi - Best Project Award
- KONE Innohack Finalist
- KONE Extra Miler Award
- Data Visualization
Poster Design - Runner Up



EDUCATION

2021 - 2021

Master's Degree in Electrical Engineering,
The University of New Brunswick.
(Courseware includes Project Management)

 Fredericton, NB, Canada

2008 - 2012

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

 Chennai, TN, India



WORK-STUDY EXPERIENCE

2021 - 2021

THE UNIVERSITY OF NEW BRUNSWICK



 Fredericton, NB, Canada

Research Assistant (Work - Study Program) (October 2021 to December 2021)

- Coordinating and supporting the development of a ground based wind imaging instrument (Imager) for an university based Cube Satellite project.
- Design and modelling of thermal sensing system of wind imaging instrument to ensure the virtualisation of real environment.
- Engineering Calculation based component selection for the Test Environment set-up.



PROFESSIONAL EXPERIENCE

2014 - 2021

KONE CORPORATION



 Chennai, TN, India

Senior Electrical Engineer (October 2018 to February 2021)

- 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, critical to quality factors and production feasibility.
- Strategise with key stakeholders such as mechanical design team, suppliers (PAPP) and production managers for driving and executing the change requests throughout the various stages of product change management.
- Understanding the change requests, planing and delating the tasks to teammates through the channel of change request process that includes change registration, change decision, prototyping, piloting, supply line validation and field line validation.
- Execution of Change Request steering discussion with other stakeholders to drive the change requests with sequential approval milestones.
- Implementation of changes in electrification architecture according to the periodic revisions of regulatory standards.
- Analysis of the quality feedbacks report related to the electrification module from the site and providing technical solution accordingly.
- Upgrade design of existing system based on corrective actions, code requirement, offering improvement, quality or reliability improvements.
- Preforming the design reviews, DFMEA, Risk analysis and maintain corresponding reviews.

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 selection and sizing, Electrical Drives, Actuator Switches, Load Weighing Sensors, etc. based on the product configurations 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.



SOFTWARE SKILL SET

- AutoCAD Electrical
- Vertex ED-24
- MATLAB & SIMULINK
- OrCAD Capture
- PCB Editor & Pspice
- MathCAD
- VariPDM & Variclient
- EngCalc
- SAP
- R Programming
- Clear Case
- Source Insight
- Microsoft office tools

- Prototyping & Piloting of the entire electrical system in the In-House & Field with systematic commissioning.
- Design of LED lighting System with Wiring Circuitry, Driver Selection, Lumen Calculation and configuration using Math-CAD.
- 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.
- Supply Line & Pre-Production validation using SAP Software before the product releases.
- Modernization of Electrical Systems with replacing/retaining the existing components as an objective of Total Repair Business with cost benefits.
- Analysis of supplier manufacturing processeses and conveying the critical to quality parameters to validate quality and resolve technical issues at supplier end.
- Supplier selection and consistent supplier follow-up for improvement iteration in new product development.
- 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.
- Creation of bill of materials, item masters and product structure database in the Product Database Management software.

PERSONAL TRAITS

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

- Calculation of energy consumption for the electrical system in both Standby Mode & Operational Mode for the design of the energy efficient products.
- Calculation of Early Failure Rate (EFR) over the rolling period of time to increase the level of quality of the products present in the market.
- Development of customised R&D Test-Setup, Apparatus and Simulator along with the Sub-Contractors and Suppliers.
- Quotation enquiry study, Costing workout and costing comparisons based on the bill of materials and commercial requirements.
- Supporting the reliability engineers for regulatory testing of Electrical / Electronic solutions such as HALT (Highly Accelerated Life Test), EMI (Electro Magnetic Interference), EMC (Electro Magnetic Compatibility) testing as required per regulatory standards at external agencies.
- Maintaining and updating product quality documentation for product installation, maintenance and specifications.
- Providing product support for Testing, Manufacturing, Sourcing, Quality & other cross functional business units.



LANGUAGES KNOWN

- English
- Tamil
- Telugu



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 Devices.
- The hardware testing involves the application software developed for hand held mobile devices is tested for its functionality, usability and consistency.



HOBBIES

