

Raghul Mohankumar

Graduate Student (Electrical Engineering)

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Click here to view portfolio website

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An active Electrical engineer with 7 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 related to electrical architectures.

A collaborative communicator focused on building relationships across business lines.

AREAS OF EXPERTISE

- Electrical Machines
- Electrical Circuit Design
- Wiring Harness Design
- Lighting Development
- Electrical System Integration
- Variable Voltage
Variable Frequency (VVVF) Drives
- Prototyping and Piloting
- Electrical Components Selection
- Failure and Risk Analysis
- Time Management and Prioritisation

ENGINEERING SOFTWARES

- AutoCAD Electrical
- MathCAD
- VariPDM
- EPlan
- Vertex ED19
- SAP
- Microsoft Office Tools

LANGUAGES KNOWN

- English
- Tamil
- Telugu

EDUCATION

2021 - current

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

2008 - 2012

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

PROFESSIONAL EXCELLENCE

- Indigenisation of cost competent Load Weighing Strain Gauge Sensor for Elevator Products
- Design of Speed Indication Module for Rescue Operations during Human Trap conditions
- Development of LED based Interior Lighting by engaging with suppliers for energy efficiency
- Prototyping of Child Trap Monitoring system in Elevators using Arduino UNO module

PROFESSIONAL EXPERIENCE

2014 - 2021

KONE CORPORATION, Chennai

Senior Electrical Engineer (1st October 2018 to Current)



- Incorporating the Engineering changes in Elevator Electrification Architecture by developing 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 suppliers, frontline and production co-ordinators for driving and executing the change requests throughout the various stages of product change management.
- Implementation of changes in electrification architecture according to the periodic revisions of Elevator standards such as EN81-20 / EN-81-73.
- Analysing the quality feedbacks report related to the electrification module from the site and providing technical solution accordingly.
- Modifying the circuit drawings in the electrification architecture for better modularity and productivity using Eplan

Electrical Engineer (23rd July 2014 to 30th September 2018)

- Electrical System Design includes the Wiring Circuitry & harness schedule for Shaft, Machine room & Car using Auto-CAD for the Elevator Electrification according to the IEC 14665 / EN-81-20/ IEC 60947 standards.
- The Component Selection includes switchgear, Electrical Machines, Electrical Drives, Actuator Switches, Load Weighing Sensors, etc. based on the Speed of Operation and Passenger Capacity.
- The Prototyping & Verification of the entire elevator control system in the In-House & Field.
- Design of LED lighting System with Wiring Circuitry, Driver Selection, Lumen Calculation using Math-CAD.
- Supply line & Pre-Production Validation using SAP Software before the Product Releases.
- Co-ordination of regulatory testing of Electrical / Electronic solutions at external agencies, including HALT (Highly Accelerated Life Test), EMC (Electro Magnetic Compatibility) testing, as per EN 12015/16 standards.
- Involvement in supplier manufacturing processes by analyzing & conveying the critical to quality parameters to resolve technical issues at supplier end.
- Documentation of the Circuit Drawings, Wiring Harness Drawings, Operational sequence, Product descriptions, Bill of Materials, etc. based on the parameters such as distance of travel and speed of operation.
- Creation of Bill of Materials, Item Masters and Product Structure database in the VariPDM Software.
- Electrical module customization to replace and retain the existing components of old elevator system.
- The Energy Consumption Calculations for the Electrical System in both Standby Mode & Operational Mode for the design of the Energy Efficient Products.
- Costing workout and costing comparisons based on the Bill of Materials and commercial requirements.
- Creation of Delivery Documentation Circuit Drawings for easy troubleshooting of the Elevator Electrification Architecture at site.
- Design & Development of CCTV Cable integration with Elevator Traveling Cable to enable CCTV Monitoring for the safety of elevator passengers.

PROFESSIONAL EXPERIENCE

2012 - 2014

TATA ELXSI LIMITED, Bangalore

Engineer (18th July 2012 to 17th July 2014)



- Integration of the Hardware Drivers with the Middleware and Applications in the Set Top Box System using C language
- Prototype Testing includes framing of regular and adhoc test cases using white and black box testing methodology
- Validation of Motorola Embedded Devices for reliability, UI improvement, usability, regression and consistency