AMRUTA JOSHI

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Bachelor of Engineering with 7 years of experience in core electronics/Lighting/Switchgear industry. Knowledge of electronic circuit design modification, fault analysis and testing.

Education

Bachelor of Engineering

BE (Electronics & Telecommunication) from Mumbai Educational Trust Institute of Engineering, Nashik (University of Pune) in 2010 with '**First Class**' 63.87% marks.

Class XII

Class XII (Science) from University of Pune, Maharashtra State Board in 2006 with '**Grade I**' 63% marks

Class X

Class X from University of Pune, Maharashtra State Board in 2004 with '**Grade I with Distinction**' 77.2% marks

Experience

Design Engineer

Esbee Electrotech LLP, Pune, 3 years and 5 months(2016-2020)

Key Highlights:

- Worked on new electronic circuit design and modification in the existing design of various products for increased accuracy, efficiency and to reduce the cost.
- Involved in the development of Switchgear.
- Ability to read / understand Drawings and technical specification like IS, IEC.
- Selection of electronic components.
- Design calculations for the electronic components.
- Schematic design and simulation on Orcad17.2 software.
- Prototype design.
- Design verification and validation.
- Design documentation technical specification, BOM, DFMEA, PFMEA, PFD, design verification, validation...

Projects:

- Design modification of LED strip
  Description: This is the light source used to light small cubical box. The 3 LED strip is modified to single LED. It is designed to get specified light output in reduced size and cost. Use of single LED is the feature of the project. The single LED light significantly light up's the box. The system operates on 12VDC power supply. The role is in component selection, design calculations, schematic design, prototype design and validation.
- Design of cabinet light and LED indicator
  Description: Aimed at high light output at 2m distance. It gives sufficient light in day light as well as at night. The feature of the project is the use of power LEDs. It works on 240 VAC power/mains supply. The role is in design modification, component selection, schematic design, prototype design and validation of the design.

Personal Info

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Nationality
Indian

Passport
Yes

Languages
English
Hindi
Marathi

Skills
Electronic circuit design

Component Selection

Design calculation

OrCAD17.2 Schematic capture

Prototype design

Technical Specification

Design Verification

Surge test of 3KV passed as per IEC 61000-4-5 standard.

- Design of Emergency light

  Description: The light is designed for emergency application. It gives sufficient light output in case of emergency. High light output in compact size with significant spread is the feature. It operates on 24VDC power supply. The role is in design and validation of Emergency light for specific light output as per customer requirement.
- Design modification of elevator light

  Description: This light is used to light the elevator. It aims at reduced cost with increase light output. The use of low cost power LEDs is the feature. It operates on 240 VAC power supply. The role is in design modification of LED circuitry by considering the detailed specifications of existing design parameters. Successfully pass the reliability test.
- Design of low voltage cabinet light

  Description: It operates on 24 VDC power supply. Boost converter is used to get the desired light output. The role is in the design of LED circuit and driver circuit by considering the input specifications.
- Tower light

  Description: It indicates the state of machine processes. The modifications in the design of Tower light for increased light output and efficiency.

Bill of material

Axapta Microsoft AX ERP system

Cost estimation

Documentation

Design validation

Technical knowledge

Design Engineer

Research Center for Sustainable Solution Pvt. Ltd., Nashik, 1 year and 8 months(2015-2016)

Design modification

Key Highlights:

- Design modifications in the design of DC, AC driver and charger circuit, worked on microcontroller PIC12F508, TMS320F28035 .
- Selection of electronic components and Design calculations
- Schematic and PCB designing modification using PCAD2004 Electronic Design Software.
- Control card + Charger PCB design modifications.
- Testing and Troubleshooting of control card + charger circuit, chargers, charger and drivers, DC drivers, AC drivers of LED lights.
- Documenting design specification sheet of the products.
- Involved in program burning activities in microcontrollers using MPLAB ICD3 and XDS100V2.

Product specification check

Testing analysis

Schematic and PCB design modification

Projects:

- Design of DC LED driver

  Role: Introduced dimming circuit in DC LED driver using PIC12F508. It involves detail study of datasheets, Schematic design modification, deciding the values of resistors for 50% dimming, layout design modification, Testing and verification of the circuit.
- Design Solar Hybrid Charger circuit

  Role: The role in Schematic and PCB design modification, Testing and verification.
- Design security system

  Role: Deciding the value of voltage and current configuration resistor, schematic design for the camera monitoring system, layout design, Testing

PCAD 2004

Troubleshooting

and verification.

Application Engineer

Omniscient Electronics Pvt Ltd, Mumbai, 6 months(2014-2015)

Key Highlights:

- Study customer specification and understand the requirement.
- Matching existing product with customer requirements.
- Suggesting optimum product in line with customer specification.

Electronic Engineer

Prime Ltd, Nashik, 9 months(2013-2014)

Key Highlights:

- Testing of LED lamps, street lights.
- Worked on quality and testing of electronic circuits for efficient performance of the system.

Electronic Engineer

Elcome Group of Companies, Navi Mumbai, 1 year & 6 months(2011-2012)

Key Highlights:

- Fault analysis for efficient and trouble-free performance of the circuit.
- Conducted detail study of electronic circuits; administered activities related to fault finding & providing solutions to customers like Indian Railway.
- Worked on Leica cards.

Academic Projects

Academic Seminar Delivered:

- Wireless Notice Board Display using RF

Academic Mini Project Handled:

- Solar Powered Reading Lamp.

Description: It was a self contained reading lamp consisted of a Small Solar Panel, UPS Battery and LED Circuit Board. Circuitry ensured long battery life by preventing over charging and excessive discharging.

Academic Project Handled:

- Wireless Notice Board Display using RF.

Description: Aimed at decreasing manual work & time consumption & made notices visible from long distance. Use RF Technique as an additional feature to the system. The notice was edited or typed on computer and it was displayed on LED display in rolling fashion

Beyond Academia

- Actively participated in Techno Fest Project competition conducted by MET IOE, Nashik.
- Won prizes in Slow Cycling and Drawing Competitions.
- At School and College Level proactively participated in drawing competitions and running, throw ball competitions.

Analysing requirement and specifications

Providing optimum solution

Testing

Status monitoring

Analysing faults

Problem solving

Knowledge

Circuit Maker

Eagle 4.16

Microsoft Word

Microsoft Excel

Microsoft Power Point

IS, IEC standards

Strengths:

I have an analytical mind with the ability to think clearly and logically. Acquired knowledge of new methods, technology & industry trends. I am well versed with the concepts. I am capable at grasping new technical concepts quickly and utilizing it in a productive manner. I have ability to work accurately and pay attention to details.