
PROFILE & VALUE

- A well-qualified and a passionate professional with 8+ years of Work experience in various processes in Research & Development, manufacturing like SPM (Special Purpose Machines in the domain of, LabVIEW, MATLAB, & Product development etc.

AREAS OF EXPERTISE

- Product Design & Development
- Project Management
- Motor & Drive-Train Selection
- Reverse Engineering
- Electric systems
- Proto development
- Excellent Verbal and Technical Report Writing Skills
- Analyzing the Li Battery SOC

SOFTWARE PROFICIENCY

- MATLAB
- LabVIEW
- Motor Controller Software
- MPLAB X IDE (Debugging the Code)
- Microsoft office
- Visual studio

INSTRUMENT PROFICIENCY

- Thermal Imager
- Programmable DC Load
- Eight Channel Digital Phosphor Oscilloscope
- Battery Capacity Tester
- Data Loggers and LCR Meter
- True RMS Multi meter and Clamp meter
- Eight channel Digital oscilloscope
- Dyno meter testing for BLDC Motor and Controller.
- PCAN Analyzer
- Battery Life Cycle Tester

PROFESSIONAL EXPERIENCE

August 2020 to Till Date

AMPERE VEHICLES PRIVATE LIMITED, COIMBATORE

Designation : **Assistant Manager – R&D**

Roles & Responsibility

- Summarizing the Regulation, Technical Requirements for E-vehicle Development.
- To prepare necessary technical requirement for New Product Development in E-Vehicle.
- To Lead a Team of 5 to carry out the various testing in the Vehicle Level Analysis.
- Analyzing the LA & Li Battery SOC with different conditions along with the CAN Communication.
- Managed CFT Team for Scheduling Pilot Batch Production.
- Simulating the Battery Model & Vehicle in MATLAB with various inputs.
- Analyzing the BLDC Motor & Motor Controller Characteristics with different parameters.
- Characterizing the Instrument cluster for different models

April 2018 to August 2020

AMPERE VEHICLES PRIVATE LIMITED, COIMBATORE

Designation : **Senior Electrical Engineer - R&D**

Projects Handled : BVMS (Battery Vehicle Monitoring System) & Li Battery Analysis

Roles & Responsibility

1. BVMS- Battery Vehicle Monitoring System

- Developed Algorithm to Measure SOC for LA & LI Battery
- Analyzed the Battery SOC Level with Different Load conditions using Chroma Battery Discharger
- Temperature Analysis for the Battery and other components in the Vehicle level.
- Interfaced the Vehicle data using MODBUS communication in Visual Studio HMI to display the parameters.
- Developed Program to interface SD card, Bluetooth, GSM, GPS with 16-bit Micro controller, M60 Modules.

2. Li battery

- Analyzing the different types of cells to meet the E-Vehicle development.
- Analyzing the Battery Energy consumption with respect to the Various Load during range test.
- Characterizing the Regenerative current in the Controller with the Load.
- Supporting programming level with Dspic Microcontroller and Texas SOC IC for Product Development.

September 2014 to December 2017

YASHIKA INDUSTRIES

Designation : **HARDWARE & SOFTWARE ENGINEER (Certified in CLAD (LabVIEW))**

Projects Handled : Special Purpose Machine Manufacturing for Different OEM in LabVIEW & Embedded domain.

Roles & Responsibility

1. AUTOMATED GROUND VEHICLE:

- Performed a Hardware & Software Implementation for an Autonomous Robot that could service in the real time application in major industries for servicing the requirements.
- The project is headed with NI Sb Rio module which could serve both analog and digital I/O's for various operations. The System is designed in such a manner that could be worked along with the latest technology which is a GPS controlled one. It also interfaced with Embedded domain to access with other Modules

2. HI POT TESTER

- The Hi pot tester is an Instrument that could service to test the dielectric strength of the component under testing.
- The system consists of Electrical Components that could serve the operations for dielectric testing.
- A high voltage design to test the dielectric test for the certain high components in the electric field which could test up to 70kv.
- The entire set up is controlled by the NI S brio module which could service for the operations. It is also a portable where it can be customized to any locations.
- I worked as a Project Leader for this entire project

3. GAS TURBINE SYSTEM

- The project is being headed with Data Acquisition for Gas Turbine system. The DAQ is being carried out by the NI Crio which has different analog and digital modules for different measurement with Microcontroller interfaced.
- The entire system is to measure the various parameters in the Gas Turbine at various stages for development system in the aeronautical field.
- I worked as a **Project Leader** for this entire project

4. KOCHI METRO RAIL PROJECT

- This project is to perform the testing assembly for Kochi Metro Train. The project is to make the testing looming boards for the entire setup of KMRL project.
- Since it is a development project that could be used for testing purpose of Electrical looms that could be used for multiple looming assemblies.
- I worked as a **Project Leader** for this entire project.

5. GPU TEST RIG

- It is a development project which is used for the testing of petrol pump with different categories and different stages.
- The project is controlled by the NI Compact Rio has 8 slots for different modules for various operations.
- The GPU (Global Pumping Unit) test rig is designed in a manner to undergo various types of tests to satisfy its rated conditions.
- It is being operates along with the pick and place mechanism which is to ease the employee workload. It also controlled with various types of sensors and other electrical component.
- The project set up is being estimated at large scale and it being completed with Industrial specification, and I was the **Project Associate** for this project.

6. DATA ACQUISITION CONTROL FOR INVERTER

- This project was based on the high voltage and current measurement of inverter that could be used in the latest technology in electromotive by Robert Bosch.
- This entire set up is controlled by PXI controller where high current and voltage is being measured by using the appropriate current and voltage sensors.
- The system is interfaced with the CAN methodology and many of the EMI noise had been arrested accordingly.
- The various parameters had been measured and it had been transmitted to the host PC through TCP/IP communication.

November 2013 to August 2014

ALSTOM TRANSPORT INDIA LIMITED

Experienced of about 10 months in **Production Department** for **Electrical Looming** of Metro Trains for worldwide.

LARSEN and TOURBO

Experienced of about 3 months in **Heat Treatment Analysis** for the molding metals for the use of **Windmills**.

EDUCATION QUALIFICATIONS

Course	Institution	Board of Study	Year of Passing	Percentage
BE-EEE	Sri Shakthi Institute of Engineering and Technology	Anna University	2009-2013	8.12(CGPA)
HSC	Kadri Mills Higher Secondary School	State Board	2009	83 %
SSLC	Sri Jayendra Saraswathy Vidhyalaya Matric Higher Secondary School.	Matriculation	2007	83%

Declaration

Hoping to be provided an opportunity to work in your esteemed organization with humble submission of my resume and I assure you that I shall perform my duty with honesty, sincerity, hardworking capacity which polishes my careerevery time.

Place: Coimbatore

Date:

Yours Sincerely,
(**Manickam K**)