

NAMAN VYAS

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EXPERIENCES

EXIDE ENERGY SOLUTION LIMITED | *Graduate Engineering Trainee (GET)*

06/2023 – Present

- Working in R&D department, Testing and Validation of Battery Packs
- Received Best Team Award for Battery pack readiness and UL Certification
- Stationary Telecom Battery Pack assembly, Failure test, Observation, Rework and Dispatch
- Received Best Team Award for Battery pack readiness and UL Certification
- Assisting Senior Engineer with other Projects
- DC Cabling Work and Wire Harness Routing
- Worked with Different types of lithium-ion cell chemistries NMC, LFP and LCO.
- Performed various Protection test of battery packs like, Over Voltage test, Short Circuit Test, Reverse Polarity test, Over- Under Temperature Test and Thermal Propagation test.
- Proto build, Firsthand Battery packs for mechanical design and electrical calculation validation

INDIAN INSTITUTE OF TECHNOLOGY, GANDHINAGAR | *Research Intern*

07/2022 – 06/2023

- Aligned with SYSIDEA Robotics Lab, Making the Robotic Actuator for smooth Robot Operations
- Integration of different Speed and Current measuring sensors
- Working on DC and BLDC Motors with Their Driver circuit to enhance the efficiency.
- Creating Research setups for Lab's Development Activity
- Worked on Adaptable Gripper Design and Motor Calibration with Spring

GTU ROBOTICS CLUB | *Robot Design and Manufacturing Leader*

08/2019 – 05/2022

- My role was to design robot's drivetrain and mechanisms and build prototypes.
- Guide and Teach CAD Designing software to junior teammates.

PROJECTS

PREPARATION OF BATTERY PACK FOR UL CERTIFICATION | *Company's New Product Development Project*

- The application of this battery pack is to ensure uninterrupted power supply to the server room.
- Carefully follow the instructions given by the designer assembled the first 12 battery packs, to be dispatched for UL Certification
- By successfully receiving the UL Certification, this battery pack becomes the First stationary battery product in INDIA to get UL Certified.
- For clarification some tests were performed in-house like vibration testing, over current charge and discharge Short Circuit, Reverse Polarity test in which my role was to assist senior engineer to assemble the packs, to build the safe setup for performing tests etc.
- Along with the UL Certification, UN38.3 and IEC certification was done.

ASSEMBLY, CYCLE TESTING AND DESTRUCTIVE TESTING | *Company's Ongoing Project Work*

- The application of this battery pack is specially designed to provide backup power in case of unforeseen power outages to the telecom towers.
- The energy ratings of the pack are 48V and 100Ah, to get power backup from the battery pack multiple packs are connected parallel to each other. I am working on 8 pack parallel system, as it is the standard essential customer's requirement.
- I am Responsible for doing cyclic testing of battery packs at different temperatures to verify the climate effects on the pack.
- Also, some destructive testing were performed, like thermal propagation test, Short Circuit test

DESIGN AND DEVELOPMENT OF ROBOTIC ACTUATOR | *Final Semester Internship Project at IITGN*

- To build a working prototype of A Robotic actuator which has rotary encoders, Geartrain and motor driver.
- For early stage prototype a DC motor with custom designed geartrain and absolute encoder were used
- In this project SolidWorks, EasyEDA and Arduino software were utilized.
- In further a design of compliant actuator was done, A series elastic element was introduced in the Design.

Multi Robot System for Lagori Breaking and Piling | Team Project at DD National Robocon

- Task was to build two Mobile Robots that can play Traditional Indian Street game named as “LAGORI”.
- Periphery sensors like mini-Lidar, Intel Real Sense Camera, Magnetic Encoders, Lid Switch, Pressure controller, PS4 Remote control (To operate robot from distance)
- Arduino mega2560 and ESP32 wroom Development board
- Arduino C and Python as programming languages were practiced.
- Lithium Polymer battery and compressed air in the bottle were used as energy resources for Robot.

EDUCATION

GUJARAT TECHNOLOGICAL UNIVERSITY | Chandkheda, Ahmedabad.

06/2019 – 06/2023

- Bachelor of Engineering in Electrical Engineering
- Graduated with securing **First Class with Distinction; CGPA: 7.6/10**
- Active core Team member of IEEE VGEN Student Branch in the Photography and Video shooting Sub Department
- During my freshmen year, I was actively aligned with the NSS (National Service Scheme) enthusiastically participated and helped, various social events for Nation Development
- Supported Team to Organizing technical or non – technical events.

SHREE SWAMINARAYAN HIGH SCHOOL | Bhavnagar, Gujarat.

05/2017 – 05/2019

- Higher Secondary schooling with Science Stream
- I've Opted Physics, Chemistry, Mathematics, Computer Science and English Subjects in my high secondary schooling.
- I was examined by Gujarat State Board name as Gujarat Secondary and Higher Secondary Education Board.
- Successfully completed high schooling securing HSC Board Grades of **CGPA: 7.8/10**

AWARDS

OUTSTANDING TEAM AWARD DECEMBER 2023

- I received this award along with the team for contribution made by working in CFT for the team efforts towards “East Penn Pack Readiness and Securing UL Certification.
- To hit the deadline we worked overnight, weekends and some holidays. But it was all Worth it.

VISVESVARYA BEST ROBOT DESIGN AWARD | DD National Robocon 2022

- DD National Robocon was organized by IIT Delhi at Tyagraj Stadium New Delhi.
- It was a national robotic competition in which more than 30 teams across the nation participated, and I was robot design leader of our Team GTU Robotics Club.

1st RUNNER UP AND 9th RANK IN INTERNATIONAL ABU ROBOCON 2021 | ABU Robocon 2021

- I was Core team member of GTU Robotics Club, my task was to calculate the trajectory of arrows thrown by robots, to feed accurate values to the sensor and providing mathematical equations for Documentation of the two robots, which is submitted to the Competition organizer as per the commencement of Rule.

1st RUNNER UP AND TOYOTA SPONSOR SPECIAL AWARD IN ABU ROBOCON 2020 | ABU Robocon 2020

- Freshly joined the team as junior team member, my role was to provide calculations of robot's speed and torque requirements and selection of DC Motors for specific mechanisms.

SKILLS

Technical Skills: Electronics Hardware Debugging, DC Circuit Analysis, DC Cabling, and routing, Wire harness, Lithium-Ion battery pack assembly, Battery Management System testing, PCB Designing (Easy EDA), SolidWorks, MS Office

Non-Technical Skills: Adaptability, Excellent Teamwork, Attention to details, Root Cause Analysis, Critical Thinking, Project Management, Time Management, Leadership, Communication Skills (Verbal and Written), YouTube Training Videos

SELF Declaration:

I hereby confirm that the information provided above is accurate and truthful to the best of my knowledge and belief.

- Naman Vyas