Muhammed Syedali N

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Kerala, India

EDUCATION

- **Electronics and ICT Academy IIT-R association with Intellipaat**

  Electric Vehicle Design and Analysis   *June 2023 - December 2023*

- **T.K.M. College of Engineering**   Kerala, India

  Bachelor of Technology in Electrical and Electronics Engineering   *August 2018 – May 2022*

- **Sree Narayana Public School**   Kerala, India

  Central Board of Secondary Education; Biology – Maths Stream   *June 2004 – March 2018*

INDUSTRIAL EXPERIENCE

- **Geetron Geepas Western International Group**   Dubai, UAE

  Embedded System Engineer in Research and Development Team   *November 2023 – Present*
  - Working on Hardware and Software based rapid prototyping and development for home automation and IOT applications.
  - Developed power converters for light dimmer circuits, embedded systems and other related peripherals.
  - Worked on PCB design and Schematic Development
  - Worked on microcontrollers like STM32, TM320, Atmega, ATtiny, ESP32, EFR32 and other single board computers like RPI, Nano PI, Orange Pi.

- **TATA ELXSI LTD**   Kerala, India

  Engineer Automotive Electrification Competency   *August 2022 – November 2023*
  - A setup consisting of PMSM and SRM coupled together as a dynamometer was developed for the purpose of running and assessing the motor's performance using different motor control methods.
  - Development of electric vehicle prototypes to enable testing and demonstration of designed hardware and software.
  - PDU integrated BMS with passive cell balancing was developed for a 48V battery pack that is appropriate for use in two and three-wheeled vehicles.

- **Kasperob Robotics Private Limited**   Kerala, India

  Circuit Designer | Programmer | Product Development   *April 2021 – November 2021*
  - **Work:** Developing Electric Fencing monitoring system with remote energising, periodic status update, failure area identification and animal protection.

- **Concepts Study Centre**   Kerala, India

  Instructor   *March 2018 - Present*
  - **Work:** CBSE Class 8th to 10th Science Subject Instructor. Included various practical sessions that supported the student's level of theory understanding.

- **Kerala State Electricity Board Limited**   Kerala, India

  Student Intern   *$23^{rd} – 27^{th}$ July 2019*
  - **Work:** Handling customer care section, updating and reviewing cloud data entries, Substation maintenance assistance and Billing Section assistance.

PROJECTS

- **Electric Kart:** For a National Competition, I was opted as the Captain for fabricating an E-Kart. The Kart was awarded with best electrical circuit and architecture award, runner up in overall design and best innovative cart award. (Certified by Edgeline Wisdomatic Swarms) The cart is being re-fabricated every year with necessary modification. (Certified by National E-Kart Championship) (Certified by Indian Karting Race ISIE).

- **Dashboard Display and Vehicle Monitoring:** Designed and fabricated the device for an All-Terrain Vehicle. The device monitors CVT temperature, engages cooling mechanism and updates the driver with average, maximum and instantaneous speed, fuel reserve and engine temperature. (Certified by SAE INDIA).

- **Solar Charging Station Surveying Device:** Designed and built a device to log data, monitor, and assist in determining how cost-effective it is to install a charging station in the examined region.

- **Electric Solar Vehicle:** For a nationwide competition, I led an electrical team to build an autonomous electric solar car. With the best business strategy and cost report award, we were able to get All India Rank 4. (Certified by ISIE India).

- **Automatic Respiratory Aid:** Developed the whole programme and CAD model for the device that received national notice and was recognised by Kerala Technological University with a monetary prize.

- **Automatic Hand Sanitiser:** Designed and Fabricated a simple Automatic Hand Sanitiser and donated to Kollam Collectorate and Kollam KSRTC during COVID-19 pandemic.

- **Brake System Plausibility Device:** The device compares Brake pressure and Throttle position to identify a faulty condition and kills the engine. The device was installed in a vehicle designed by the Formula Student Team.

- **Coil Gun:** A heavy-duty coil gun that runs on a 240V AC supply was developed. The projectile could be launched with sufficient force to a range of 10 metres. (Certified by Tathva NIT Kozhikode)

- **Revive:** As a part of college initiative, during the 2018 Kerala floods, I led a team to remote flood-affected districts for electrical maintenance and to guarantee the operation's safety. Also we built 100 temporary distribution boards with the necessary electrical safety equipment. (Certified by KSEB & Kerala Govt.)

OTHER EXPERIENCE

- **Innovation and Entrepreneurship Development Cell TKMCE** *May 2020 – June 2021*
  Chief Technology Officer
  - **Duty:** Coordinating Technical work, improving technical and practical skills of students through workshops and other means.
  - **Work:** Arduino workshop for freshers, Git-Hub workshop, CAD designing workshop, Innovation Competition, CAD Challenge.

- **Institution's Innovation Council TKMCE** *November 2020 – June 2021*
  Vice President
  - **Duty:** Coordinating Technical work, Person of contact with faculty member, Periodic updates to IIC, quarterly program charting, Documentation.

- **Institute of Engineers India** *February 2019 – January 2020*
  Student Representative
  - **Duty:** Ensure all initiatives of IEI reaches students, convey student needs and difficulties to IEI Executive Committee.
  - **Work:** Organised National Level Workshop on Electric Vehicle Technologies and Challenges.

SKILLS

- **Programming Languages:** C/C++, Python and MATLAB.

- **Electronics:** Analog and Digital Circuit Designing, Circuit Simulation, PCB Designing.

- **Microcontrollers:** Microchip AVR, Raspberry Pi, STM32, TI C2000

- **Soft Skills:** Communication, Teamwork and Coordination, **Work Ethics**, Constructive Feedback, Experimenting, Innovative, Quick Learner.

- **Tools:** Git & GitHub, MS Office, Proteus, Solidworks, Ansys (learning), EasyEDA, KiCAD, FreeCAD, LTSpice.

ACHIEVEMENTS

- **Circuit Designing Winner:** runner-up in event named "Component Combat" conducted by SANKET NIT Calicut

- **Digital Circuit Designing Winner:** second runner-up in event "DIGIMANIA" conducted by Tathva NIT Calicut

- **FAB Fellowship:** selected from TKMCE to receive FAB LAB training and to be a FAB Fellow of TKMCE

- **Young Innovator Programme Finalist:** selected from district level for YIP an initiative by Kerala Government.

- **Interview:** invited for "Meet the Engineer" Session by NinthSem which is India's one of the EdTech which provides training and guidance to engineering students.

- **Best Science Project Award:** won Kollam Regional level best science project award in Students Science Festival of Kerala 2017.