



KUMAR GAURAV

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OBJECTIVE

Seeking an **Entry level** job in a company that inspires me to expand my learnings, knowledge and skills, while providing significant contribution to the organisation. - *Available for immediate joining.*

SKILLS

- **PROGRAMMING LANGUAGES:** PYTHON, C, SQL, EMBEDDED C, BASH, Microcontroller Assembly level language, LATEX.
- **TOOLS :** Altium Designer, Eagle, KI-CAD, NI-LABView, NI-Multisim, AutoCAD, Eclipse, ARM Keil-μ Vision, Atollic-Studio, SUMO, JUPITER-LAB, SPYDER, SUBLIME TEXT, MATLAB, Microsoft Office, Git, Proteus, Jabref.
- **PROTOCOLS:** CAN, SPI, UART, I2C, SCI

EXPERIENCE

• DESIGN ENGINEER (INTERNSHIP)

RENON INDIA PVT.LTD, SURAT, INDIA | OCT-2020 - PRESENT

- Requirement collection pertaining to new product development BMS and protection circuits.
- Firmware development and debugging of embedded firmware.
- Software testing : Writing unit/integration test cases for firmware.
- Power electronics : development of power electronics products associated schematic and Gerbers.
- Failure analysis and Identification of root cause in PCB
- CLI design and scripting and analytics in python
- Product conceptualization, pre-prototyping and prototyping of battery packs for various application
- Documentation: Source-code documentation, work instructions, authoring test reports, DVPR and operation and installation manual and for designed products.

• RESEARCH PROJECT CO-ORDINATOR

FISAT FABLAB, KOCHI, INDIA | Feb 2019 - JULY 2019

- Operations and Maintainance on 3D printers, Laser Engraver, CNC machines and other digital fabrication equipments.
- Designing of electrical and electronics circuits for hardware, embedded systems, IOT, modeling and printed circuit boards
- Research and Development work on developing an Electric motor kit for EV conversion of vehicles.

QUALIFICATION

• MASTERS IN ENGINEERING(M.E) & MASTERS IN SCIENCE (M.SC), MAJOR IN AUTOMOTIVE EMBEDDED SYSTEMS.

MANIPAL UNIVERSITY, Manipal, INDIA | 2019-ONGOING

ESIGELEC Graduate School of Engineering, Rouen, FRANCE | 2019-ONGOING

MODULES : LabVIEW programming, ADAS, Automotive electronics system, communication buses, Robotics and localization, RTOS, communication buses. sensors and transducers.

• BACHELORS OF ENGINEERING IN ELECTRICAL AND ELECTRONICS ENGINEERING (EEE)

Federal Institute of science and Technology (FISAT), India | 2014-2018

MODULES : Linear integrated circuits, Microprocessors and Microcontrollers, Electrical drawing, Power systems, Digital signal processing, Electric drives, control systems, Principles of Management, Neural networks, Entrepreneurship and development.

INDUSTRIAL AND ACADEMIC PROJECTS

HYBRID TWO WHEELER

FISAT FABLAB,KERALA | FEB-JULY (2019)

- Constructed a hybrid-electric 2 wheeler.
- Designed & Developed custom LI-ION battery pack
- Implemented regenerative braking using inverter circuit

IMPLEMENTATION OF OBSTACLE AVOIDANCE USING WIFIBOT ROBOT

ESIGELEC,FRANCE | JULY 2020

- Developed algorithm to detect obstacles using C++ code.
- Built TCP-IP protocol to connect with Wifi-bot using a standalone router.

CHARGE CONTROLLER FOR SOLAR APPLICATIONS 12V/24V 15A (PROTOTYPE)

RENON INDIA,SURAT | NOV-DEC (2020)

- Employed PWM based MOSFET switching for accurate control and Developed circuit simulation on Multisim.
- Developed and designed Reference schematics and PCB in Altium Designer with final Gerbers and drill files ready for production.

48V/30Ah Li-ion BATTERY PACK FOR EV-APPLICATION

RENON INDIA | NOV-CURRENT (2020)

- Part of prototype design team for evaluations of cell orientation, spot welding, BMS connections and insulations, cooling system internal heating characteristics, IP-64.
- Implementation of bench test and performance tests on battery pack
- Implementation of field test by retro-fitting the pack on a motorcycle and recording data via Web-server

BATTERY-PACK TEST BENCH DATA VISUALISATION USING ESP32

RENON INDIA | NOV-CURRENT (2020)

- Current and voltage value acquisition of battery pack were done successfully using Analog sensors using ESP32.
- Espressif-ESP-32 Microcontroller code implementation using Arduino IDE.
- Successful implementation of Auto refresh feature on webpage using AJAX scripts.

LANGUAGES

- **ENGLISH** Advanced Professional Proficiency
- **FRENCH** Elementary Proficiency
- **KANNADA** Functionally Native Proficiency
- **HINDI** General Professional Proficiency
- **MALAYALAM** Functionally native proficiency
- **TULU** Functionally native proficiency

HOBBIES

Adventure Quests,Delving Cars,DataResearch, ShuttleBadminton, Football, LAN Gaming, Motion Picture.

SOFT SKILLS

Critical thinking, Team Working Communication Networking Adaptability