RAKESH MUTIKE

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CAREER OBJECTIVE

My objective is to pursue my career as Electric Vehicle Design Engineer, An electrical engineer with a passion for EVs and battery technology, looking to work as Electrical Vehicle Design Engineer and Trainee Engineer add value through my technical and managerial expertise. I am also having a knowledge On Mat lab basics and Simulink basics which is helpful in designing Electric vehicles.

EDUCATION

- **Post Graduate program in Electric Vehicle Design & Development**, Skill-Lync. (2022-Present)
- **B.Tech**, Electrical and Electronics Engineering- Sree Chaitanya institute of technological sciences, |**6.3 CGPA**| (2018-Present) • **Intermediate-**Telangana state model school and junior college,Ghanmukla |**73.4%**| (2016-2018)
- 10th SSC - Telangana state model school Ghanmukla |**80%**| (2015-2016)

TECHNICAL SKILLS

- **Programming/ Simulation**: MATLAB, Simulink, Simscape,MIL,HIL,Bateery power designing ,Vechile modelling ,Power electronic converters design, Modelling of electric car using the li ion battery ,C Basics
- **Other:** MS Office ,MS EXCEL

PROJECTS

1) Design of Electric vehicle:

- The major blocks used to design the EV vehicle using Simulink are drive cycle, driver, controlled PWM voltage, Hbridge, battery source, dc motor.
- The Key components used in this project are EV battery charge, port, DC-DC converter, electric traction motor, , Power electronics controller, Thermal cooling, Transmission.
- Here I have used the FTP75 drive cycle where the stop time is 2474 seconds and it can be tested for many drive cycles.
- Advantages of EV is in order to avoid the issue of increasing pollution, global warming etc.

2) Modelling an Electric Car With, Li-ion Battery:

- In this project I have designed a model of Electric car with Li-ion Battery with the suitable motor
- I have used suitable blocks from the Sim scape power train block set
- In this project I have implemented the vehicle speed control by using the PI controller and generated brake

3) Designed a MATLAB model of an electric rickshaw:

- The major blocks used in designing the Electric rickshaw using Simulink are drive cycle, driver, controlled PWM voltage, H- bridge, battery source, dc motor.
- Here I have used my own drive cycle using an excel sheet and it can be tested for many drive cycles.
- Benefits of electric rickshaw green mode of transport, affordable, ease of access, flexible, solving the lastmile issue.

4) Mechanical design of battery pack:

- In this project I have designed a battery pack of Cell: ANR 26650M1-B which as the battery capacity of 18kwh
- Here Li-ion batteries are connected in series and parallel to calculate the required battery pack based on the cell manufacture data provided

5) Project on Adaptive cruise control:

- In this project I have created a Mat lab Simulink model for adaptive cruise control feature as per the requirement
- In this project I have used three subsystems they are Requirement 1_subsystem Requirement 2, subsystem Adaptive cruise control
- The inputs for this adaptive control are camera input, radar input, set speed Time gap, set gap cruises switch, set switch
- This mainly operates in two modes lead vehicle mode and drive vehicle mode
- **6 . Project on Speed control of a Direct current (DC) motor:**
- In this project I have designed a Simulink model for the speed control of a DC motor
- By using the PID controller knowledge gained during training designed and developed a test controller to maintain a desired speed of the motor
- We also maintained the stability of a dynamic system

ACADEMIC PROJECT:

- Three phase to five phase transformation using a special transformer connection
- Single phase boost dc link integrated cascaded multilevel inverter for pv applications
- Trained as EV Design Engineer in SKILL LYNC(Masters in EV designing)

FRESHER

AWARDS/ CERTIFICATIONS:

- MATLAB Basics - Skill Lync -(2022)
- SIMULINK Basics –skil Lynk - (2023)
- Introduction to Hybrid Electric Vehicle Using MATLAB and Simulink - Skill Lync -(2022)
- Introduction to Control of Electric Vehicle (2023)
- Introduction to model based developement using matlab and simulink – Skill Lynk (2023)
- Battery system Design for EV &ES using Matlab/Simulink - Skill Lync - (2023)
- Fuel celland ultra capcitors for EV Using MATLAB and Simulink- Skill Lync (2023)
- Introduction to (ADAS) using MATLAB and Simulink – Skill Lync (2023)
- Design Concepts of Power Electronic Converters for Industries -skill lynk (2023)

EXTRACURRICULAR ACTIVITIES

- Participated in College level events

  Participated Cricket competitions

  Sree chaithanya institute of technological

  sciences

LANGUAGES

English, Telugu