



KSHITIZ GOSWAMI

MECHANICAL ENGINEER

CONTACT

+91-923-482-4709

kshitizgoswami@outlook.com

104, AK Paramount, Bengaluru

<https://www.linkedin.com/in/kshitizgoswami/>

EDUCATION

2010

CBSE

- 9.2 CGPA

2012 - 2014

BSEB

- Science
- Gold Medalist- Awarded by HUL
- 71.8%

2014 - 2018

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

- Mechanical Engineering
- First Class
- 67%

2022 - 2024

SKILL LYNC

- PGP- Hybrid Electric Vehicle
- Result Awaited

PROFILE

A mechanical engineer with an ardor for product design and development in automotive, creates composite material-based products for this industry. I am well-versed in Electrical systems and architecture, model-development using MATLAB scripts, Simulink, and Stateflow for EV and HEV.

WORK EXPERIENCE

BMTG ADVISORS

Mechanical Engineer

2020 - 2022

- Forward Energy Based Fuel Consumption Model
 - Data is taken from ADVISOR database NREL, USA
 - Drive cycles analyzed are :- UDDS, HWFET, FTP, NEDC
 - The MATLAB Scripting and Simulink model compute fuel economy. Project emphasizes on analyzing vehicle operating points in terms of torque, transmission speed, pedal position, gear etc. by generating various plots using ODE 3 solver.
 - Stateflow is used to build logic for gear change.
 - The plots suggest urban or city drive cycle puts much pressure on the engine in comparison to highways and shows much extreme operating points due to uneven driving conditions.

PROJECTS

UDDS & HWFET drive cycle analysis

Skill Lync

2023

- My script calculates maximum positive power, negative power, energy and requirement of torque in both drive cycles.
- Parameters are varied i.e. grade, acceleration, headwind and mass. Data is read from an excel sheet.
- Regenerative braking is also used in the model which assists the vehicle in its range and gives it a longer period of run.
- Several graphs are produced to analyze both the cycles properly.
- The results show that energy required in HWFET is much uniform and at least 60% less in comparison to UDDS in order to produce the same amount of Power.

SKILLS

- MATLAB
- SIMULINK
- CATIA V5
- Python
- Excel
- Effective Communication
- Critical Thinking

LANGUAGES

- English (Fluent)
- Hindi (Fluent)

ADDITIONAL SKILLS

- Composite Material Researcher
- Hybrid Bricks for Earthquake
- LTCG Investment
- Financial Consultancy
- Sketch Artistry

CERTIFICATIONS

- **Modelling Electric Vehicle using MATLAB & SIMULINK - Part 1 &2**
MathWorks 10-17JAN & 20-15MAY, 2023
 - Controlling DC motor using PID controller
 - Modelling state machines and state diagram (Hierarchical and Parallel)
 - Worked with Simscape components connecting physical domain
 - Combined Simscape model with Simulink model.
- **MATLAB, SIMULINK & STATEFLOW Onramp**
MathWorks 2022 & 2023
 - *Speed calculation of a moving star using its spectrum*
 - Lowest wavelength is used to calculate the red shift and blue shift factor.
 - First speed of HD94028 star is calculated then speed of the remaining stars is calculated.
 - Star Spectra is plotted using the calculated data.
 - *Model to control the driving modes in automotive*
 - Simulink model is built to control two driving modes in an automotive
 - High-performance mode and economic mode.
 - *Automated robotic vacuum cleaner to cover a room*
 - Logic is built for a robotic vacuum cleaner to cover the entire room
 - Model has set velocity, angular velocity and auto-rotation in case of an impact to the wall.
 - Robot is equipped with self-charging technology.