

# N.Gunasekhar Srinivas

CAE Engineer

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*A result-oriented Mechanical Engineer targeting an Entry-level opportunity in Engineering Design, Research, and Development with an organization of high reputation preferably in Automobile and related Industries to implement the acquired skills and thus keep learning.*

- Detail-oriented CAD/CAM Engineer having a Master's degree in engineering with a specialization in Computer-Aided Design and Computer-Aided Manufacturing.*
- Conducted research in various projects by Investigating the numerical and Dynamic Characterization of Flax/e-glass hybrid composite plates and developing a Mathematical model for Flax/e-glass Hybrid Composite using the Finite Element Method.*
- Aspiring Computer-aided engineer, pursuing courses designed by skill-Lync Under Masters Certification Program.*
- Certified in Solidworks at Associate level by Dassault systems, Oct 19.*
- Pursued NPTEL Courses on Solid Mechanics from IIT Madras and Basics of Finite Element Analysis -1 from IIT Kanpur, Dec 20.*
- Possess strong Inter-Personal skills and analytical skills with an excellent problem-solving attitude*

## EXPERIENCE

### Desdeus Engineering Solution

May, 2022 to Oct 2022

PGET

Projects Handled:-

- Stress analysis of Composite shell based hydrogen fuel ball

In this project, a composite material design for hydrogen storage device was designed. In this project, Ansys apdl was used to capture the T-sai wu plot for different variants.

- Structural analysis of Water casing

In this project, contacts were made for different parts of the casing and the total deformation of the casing and the other results were found out using ansys workbench.

### Desdeus Engineering Solutions

Jun, 2021 to May, 2022

CAE Intern

Projects handled:-

#### 1. Structural Analysis of Pressure relief valve.

I have done a literature review for pressure valve, I have researched the materials for pressure valve, and found out the displacement plots, strain plots, stress plots for the different pressures. and Fatigue was calculated for different materials, and the results were compared to find out the suitable material for pressure relief valve.

#### 2. Structural Analysis of Shock Absorber.

My work is to do calculations and to do simulations to find out the suitable material for the shock absorber to sustain the weight of the bike and passengers, based on the input from the literature review the calculation was done to find out the load, and I searched the materials for the shock absorber and noted down. Natural frequencies, harmonic, and static analysis were done and the results were compared among the materials and the suitable material was found out based on the analysis,

## EDUCATION

## SKILLS

ANSA,HYPER MESH,Is-Dyna,Ansys work bench,Solidworks and Ms-office.

## PROJECTS

### Postgraduate research-based learning

Jul, 2018 TO Dec, 2018

**Project Title: Numerical study on the dynamic characteristics of Glass Fiber Reinforced Epoxy Composite Beam with Graphene Oxide**

- Description: This project investigated the dynamic characteristics of the Glass Fiber Reinforced Epoxy Composite Beam with Graphene Oxide. The Governing equations of motion of Graphene Oxide Embedded Glass Fiber Reinforced Epoxy Composite Beam was presented in Finite Element Form by using the Classical Laminated Beam Theory. The efficacy of the developed model in evaluating the properties of the composite beam were demonstrated by comparing the natural frequencies using present Finite Element Model with available literature. Various parametric studies were preferred to study the effect of Volume Fraction of Graphene Oxide and aspect ratio on free vibration characteristics and also compared the mode shapes of Glass Fiber Reinforced Epoxy Composite Beam with and without Graphene Oxide.

- Software Used: Ansys and Matlab

### Master Thesis Project (M.Tech.)

Jul, 2019 to Jun, 2020

**Project Title: Dynamic Characterization of Flax/e-Glass Epoxy Composite Plates**

Description: · In this project, the fundamental investigation of the dynamic characterization of Flax/e-Glass Hybrid Composite Plates was done and a mathematical model was developed for Flax/e-Glass Hybrid Composite using the Finite Element Method. Fabrication of prototypes of Flax/Epoxy, e Glass/Epoxy, Flax/e-Glass Epoxy Hybrid Composite was done by Vacuum Bagging Process for experimental investigation on dynamic properties. First Order Shear Deformation Plate Theory was used in the present study for mathematical modeling & natural frequencies were found experimentally by Model Testing, Effect of natural frequencies on composite material, boundary condition, and Ply Angle, and Aspect Ratio were studied. Experimental results were validated with mathematical modeling results obtained through Matlab

Software Used: Matlab .

## PROJECTS ACCOMPLISHED\_SKILL LYNC

2D- Meshing of an Automobile Hood:

- Fixed all the geometry errors in the given model
- Extracted the mid-surface by Manual Mid-surfacing Method
- Meshed the model using Shell Mesh in given quality criteria

Software used:ANSA

Tetra Meshing of Turbocharger

- The Model is Imported and Defeatured wherever required.
- Using the Volume Mesh method, Tetra Meshing is done on the model.
- After Meshing, Checked for Tet-collapse in the meshing, and the off elements were removed using the Tetraremesh method

Software used:ANSA

Meshing and Deploying Connections for an Automobile Cross car beam

- Fixed all the geometry errors in the model.
- Meshed the model as per the given quality Criteria.
- Provided required Connections to the given model.

Software used:ANSA,HYPERMESH

Meshing of Door Inner Panel Challenge

- Model is Imported and Defeatured wherever required.
- The Mid-surface of the model is taken using the manual method.
- Mid-surface is meshed and quality issues were cleared according to the given quality criteria.
- Thickness is Assigned to the mid-surface Component according to the Parent geometry.

Software used: ANSA, HYPERMESH

Meshing of Rear Wheel Holder Challenge

- Fixed all the geometry errors in the given model.
- The mid surface of the model is extracted using the mid surface option.
- Mid surface is meshed using the auto mesh option and the quality issues are cleared according to the given quality criteria.
- Finally, the model and thickness is assigned to the given model

Software used: ANSA

## LANGUAGES

**English** (Professional working proficiency), **Telugu** (Native), **Tamil** (Limited working proficiency)

## CERTIFICATIONS

- Pursued CAE Masters Certification program through Skill Lync
- Attended Two days Virtual International Conference on Application in Computational Engineering and Sciences (IConACES 2020) organized by the School of Mechanical Engineering (SMEC), VIT Chennai
- Participated in Workshop on "Programming in Python" conducted by Skill-Lync, Jun'20
- Attended International Virtual Symposium on Vehicle Crash Safety conducted by MIT-ADT University, Pune