

A.S. Avinash

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OBJECTIVE

Highly passionate Mechanical Engineer Graduate with keen interest in Design and CAE Concepts, having strong foundation in Engineering Graphics, Strength of Materials and Finite Element Analysis.

EDUCATIONAL QUALIFICATION

DEGREE	INSTITUTION	UNIVERSITY/ BOARD	SCORE	YEAR OF PASSING
Masters in Hybrid Electric Vehicles	Skill-Lync	Skill-Lync	-	Present
B.E. Mechanical	Velammal Engineering College, Surapet Chennai-66	Anna University	71%	Present
12 th	Velammal Matric Hr Sec School Chennai-66	State Board	94.9%	2014
10 th	Velammal Matric Hr Sec School Chennai-66	State Board	95.8%	2012

SOFTWARE SKILLS

- CAD tools : AutoCAD (2016a), Creo (13.0)
- Coding tool : MATLAB
- Computational tool : ANSA (v17.1.0)

COURSE PROJECTS

Calculating the Drag force against cyclist using MATLAB, Skill-Lync

- Wrote a code in MATLAB to calculate the Drag Force against the cyclist who moves at the assumed velocities
- Plotted a graph against Velocity Vs Drag Force.

2R Robotic Arm Challenge, Skill-Lync

- Wrote a code in MATLAB to simulate the forward kinematics of a 2R robotic arm manipulator automatically in space to finish the desired job.

Air standard cycle, Skill-Lync

- Wrote a code in MATLAB to visualize the P-V Diagram of an Otto cycle to provide the output of thermal efficiency of an engine.

Solving second order ODE in MATLAB, Skill-Lync

- Wrote a code in MATLAB to simulate the transient behavior of simple pendulum
- Created an animation of its motion by solving a second order ODE.

Curve fitting using MATLAB, Skill-Lync

- Wrote a code in MATLAB to fit a linear and cubic polynomial for the Cp data provided.
- Plotted the linear and cubic polynomial along with the raw data points.

Finding global maxima by optimizing the stalagmite function using MATLAB, Skill-Lync

- Wrote a code in MATLAB to optimize the stalagmite function.
- Understood the concept of Genetic Algorithm.
- Pointed the global maxima of function.

Parsing NASA thermodynamic data, Skill-Lync

- Wrote a code in MATLAB to parse the NASA thermodynamic data file.
- Calculated thermodynamic properties of various gas species.

Meshing a pressure valve using ANSA, Skill-Lync

- Completed geometry cleanup of Pressure valve model.
- Assigned PID's.
- Surface meshed the model using different element lengths to observe the geometry change.

Meshing of a turbocharger using ANSA, Skill-Lync

- Completed geometry cleanup of turbocharger model.
- Assigned PID's.
- Surface meshed the model.
- Conducted the volumetric mesh for CFD application.

Pre-processing BMW M6 model using ANSA, Skill-Lync

- Completed geometry clean-up of BMW M6 model.
- Assigned PID's.
- Surface meshed the model following the required quality criteria and meshing parameters.

OTHER PROJECTS

Design & Fabrication of Automatic Solar Tracking System

- Due to high cost, limited availability and environmental impacts of fossil fuels, industries and governments are increasingly looking into renewable sources of energy.
- Among renewable energy sources, solar energy provides the best scope for large-scale production.
- However, with the recent advancements and innovations, **Concentrated Solar Power (CSP)** technology increasingly being used as a source for production of electricity.
- This project aims at implementing the **CSP** technology by fabrication of an **Automatic Solar Tracking System** on a small scale for generating energy.

Design, Analysis and Experimental investigation of Composite Leaf Spring Material.

- Reducing weight while increasing or maintaining the strength of products is getting to be highly important research issue in this modern world.
- The Automobile Industry has shown increasing interest for replacement of steel leaf spring with that of composite leaf spring, Composite materials are widely used in automotive industries, aeronautical and marine because of their excellent mechanical properties, low density and ease of manufacture.
- A leaf spring is structural member acts as an absorbing system on the virtue of its deflection. In this project work, solid modelling of leaf spring done in CATIA V5 and ANSYS 15.0.
- The material has selected as basalt fibre composite used against EN47 material. Izod, Charpy and Flexural strength has tested in fabricated composite.

INPLANT TRAINING

- Undergone 6 days In plant Training at "SMART STAMPINGS,CHENNAI"