

Avinash Raj DGSK

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EDUCATION:

Master of Science in Mechanical and Aerospace Engineering - CGPA - 4.0 December 2022
Ira. A. Fulton School of Engineering, Arizona State University – Tempe, USA

Bachelor of Technology in Mechanical Engineering - CGPA - 3.75/4.0 September 2020
Jawaharlal Nehru Technological University, Kakinada, Andhra Pradesh, India

EXPERIENCES:

Graduate Service Assistant, SEMTE, ASU June 2021 - December 2021
Teaching Assistant and Grader for MAE 384 and MAE 340 at Ira. A. Fulton School of Engineering, ASU

Chief Technology Officer, REVOL Corp. September 2018 – August 2020
Worked on Student startup on Automobiles as CTO for 2 years and published 2 papers.

SKILLS:

Technical skills: Microsoft Office, Catia, ANSYS, AutoCAD, Solidworks, Fusion 360, Python, MATLAB, LaTeX.
Languages: Fluent in Spoken and Written English and Telugu; Can translate Hindi.

INTERNSHIPS AND TRAININGS:

Design and Development of Electric Car – FMAE India June 2020
Internship includes basics of the automobile, advanced vehicle dynamics, calculations involved in designing the components, fundamentals of CAD modeling, and CAD modeling of the vehicle.

In plant Intern - Reliance Power Ltd May 2018 – July 2018
In-Plant training on Combined Cycle Power Plant Operations under the guidance of Mr. Rakesh G Nair on Mechanical Maintenance, Industrial Safety and Engineering.

CNC and 3D Printing Workshop and Training September 2018 – October 2018
Training consists of SLA based 3D Printing and basics of CNC with a design-based project.

PUBLICATIONS:

Design of Battery Pack for Electric Vehicles – IRJET May 2019
This paper deals with the design of a battery pack for an Electric Vehicle and its calculations.

Bodyworks for Vehicles, Design and Fabrication – IRJET October 2019
This paper deals with the monocoque of a vehicle made of different materials based on requirements.

ACADEMIC PROJECTS:

Flow Simulations using ANSYS Fluent September 2021- December 2021
– Using Computational Fluid Dynamics in ANSYS Fluent, flow simulations are created for Internal Flow, Multiphase flow, and External flow for different projects.

Drop Test Simulation of iPhone 12 prototype using ABAQUS November 2021
– An iPhone 12 prototype drop test is made using the ABAQUS Explicit Dynamics and the stresses produced are observed with and without a polycarbonate protective case on it.

Design Optimization of Brake Pad using ANSYS Design of Experiments November 2021
– A Brake Pad design is analyzed for Static Structural, Transient Thermal and Modal Analysis and then is Optimized using Design of Engineering Optimization Tools in ANSYS.

Finite Elements to design a device to demonstrate Stress Concentrations March 2021 - April 2021
– A design is analyzed using Finite Element Methods on Abaqus and MATLAB to observe the stress concentrations produced while loading and the results are compared with real experimental data.

Paper Review on Robot Kinematics and Controls of Soft Wall Climbing Robots March 2021 – April 2021
– Review on how Soft Robots Kinematics and control system are designed and their working.

Ductile to Brittle transition temperature of Mild Steel September 2019 - January 2020
– The project deals with the transition temperatures of Mild Steel which is a ductile material but at Cryogenic Temperatures these properties go in the brittle direction and are observed for failure.

Design and Fabrication of Go-Kart and SAE Baja ATV November 2018 – March 2019
– Designed and Fabricated a Go-Kart for PKC Championship within the rulebook. Worked as Captain and Design Team Head and won 3 Awards for Design, Project Plan, and Innovation.