



# NARENDRA RAMAKRISHNA

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## EDUCATION

University of Dayton: Master's in Aerospace Engineering.

Dayton, OH [Dec 2022]

Core Courses- Finite Elemental Analysis, Compressible Flow, Fund Aerodynamics, principles of Corrosion, Renewable Energy System.

SJC Institute of Technology: Bachelor of Engineering in Aeronautical Engineering.

Bangalore, India [Aug 2020]

## EXPERIENCE

Product Design and Development Engineering, *Nissen Chemitec America, Inc. - Columbus, Ohio.*

May 2024- Present

- Analyzed the customer requirements to design products based on DFM and DFA using CATIA V6.
- Performed engineering analysis, design, and calculations for new plastic product development and implementation.
- Apply engineering techniques to identify appropriate materials for new products during initial design stage.
- Review and analyze the CAE results with customer for the efficient resin filling into the mold.
- Designed CORE side of the part as per customer timeline and requirement using CATIA V6.
- Evaluate how materials will perform for certain part specifications and monitor their performance.

Product Development Engineering, *Fuyao Glass America Inc- Moraine, Ohio.*

Feb 2023 -May 2024

- Responsible for new program development and launch of Honda Webasto, Inalfa, and Aisin Customers.
- Lead Tooling Engineers, Process Engineers, and Packaging Engineers to ensure compliance with program requirements.
- Review new component drawings to ensure design for manufacturing and design for assembly.
- Perform new program debugging, sample trials, and provide OEM product quotations technical input.
- Plan and execute project timeline to meet customer needs and milestones and implement Engineering Change Notices.
- Design customer trademarks using CorelDraw according to customer specifications and legal regulations.

Teaching Assistant, *University of Dayton- Dayton, Ohio.*

Jan 2022 - Dec 2022

- Teaching assistant for MEE 308 Fluid Mechanics course under Dr. Carson Running.
- Assist with difficulties in design & analysis projects using CATIA & Computational Fluid Dynamics.

Manufacture Engineering Intern, *Hindustan Aeronautics Limited- Bangalore, India.*

Aug 2019 - Sept 2020

- Developed path layout, gauges and fixtures for material testing on extruded rubber using design firm.
- Dealt with technical report writing, customer complaints & issued quality alerts, and Root Cause Analysis using 5-why.
- Participated in Kaizen events to implement 5S in the tool room to improve productivity and space optimization.

Design Engineer Intern, *Hindustan Aeronautics Limited- Bangalore, India.*

Jan 2019 - Feb 2019

- 3D design of Main Rotor blade using SolidWorks and their performance (lift and drag) is analyzed using ANSYS-Fluent Flow.
- Implemented hand lay-up technique on composite materials for four rotor blades as per requirement.
- Conducted destructive and Non-destruction test to maintain quality of blades and performed the blade assembly.

## PROJECTS

Crash analysis on 4000lbs automobile using Abaqus.

Jan 2022 - May 2022

- Utilized CATIA to design one Car-front and column for the crash test.
- Simulated materials and speed of the car-front using Abaqus to provide cost effective testing.
- Outcome: penetration of column into car-front is diagnosed by varying the speed/acceleration of the car.

Aerodynamics influence of dimple designs on Golf Balls using SolidWorks & Wind-Tunnel Testing.

Aug 2021 - Nov 2021

- Analyzed and compared Lift & Drag coefficient of different dimple-shaped golf ball in real subsonic closed loop Wind-Tunnel.
- Developed two Golf Balls of Hexagonal and circular shaped dimples using SolidWorks and 3D printed them.
- Outcome: Hexagonal dimpled golf ball with shallower depth seen 0.89 more Lift Coefficient compared to circular dimpled golf ball.

Combined Droop Nose Trailing Edge Morphed Airfoil.

Aug 2018 - Sep 2020

- Used X-foil, SolidWorks and ANSYS 14.1 for this project.
- Executed 0.5mm spacing technique to have a proper boundary condition using X-Foil and converted them using CATIA.
- Outcome: Morphing Technique increases CL to 1.34 from baseline airfoil 1.2, reduces drag by 6.5%, with delayed stalling angle.

## SKILLS

Design: 3D modeling, Solidworks, 3D CAD, CATIA, Abaqus, Ansys 14.1, Corel Draw, AutoCAD, CATIA V5 and V6 (3DX Experience).

Developer Tools: MATLAB, Strong analytic, problem-solving, and leadership qualities.

Applications: MS Office, MS Visio, Minitab.

## CERTIFICATIONS

1. CATIA V5/3DX Advance Surfacing.
2. SOLIDWORKS 2022 Essential Training and Surfacing.
3. Global Certification For Plastics Professionals.