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Tiruchirappalli, TN, India

VIMALAN F

CAREER OBJECTIVE

Highly motivated individual with advanced CAD design skills, specializing in prototype model design, structural optimization, and simulation. Eager to leverage expertise in a dynamic role that allows the application of my skills and abilities. Aspiring professional seeking a position to contribute effectively to a team.

TECHNICAL SKILLS

- 3D printing
- Metal 3D Printing (basics)
- Fusion 360
- Solid works
- CATIA V5
- Creo
- ANSYS
- Additive manufacturing
- Microcontroller and Microprocessor
- Python and C++ (basics)

EDUCATION

2022 - 2024

M.Tech - Defence Technology (Combat Vehicle Technology)

Amity University, Noida

CGPA - 7.97

2018 - 2022

B.E - Mechatronics Engineering

Acharya Institute of Technology, Bengaluru

CGPA - 7.41

2017 - 2018

Sribala Vidya Mandir Matric Higher secondary School, Tiruchirappalli, Tamil Nadu

12th

77.5%

2015 - 2016

Sribala Vidya Mandir Matric Higher secondary School, Tiruchirappalli, Tamil Nadu

10th

89.2%

ACADEMIC PROJECTS

- 3D model of the building as a ‘ engineering design’ in 2018.
- Top 5 contestants of ‘Mechatronics Innovators’ 2019-2020 at Foldable 3d printer (Acharya Institutes)
- Soft robot as ‘Mini project’ in 2021.
- Designing and development of dual colour multi material foldable 3d printer (Btech project -2022)
- Designing and Fabrication of miniature Unmanned Autonomous Ground Vehicle (MTech NTCC 1&2 - 2023)
- Researched and compared Iron Fist and Trophy APS technologies, offering actionable recommendations for military vehicle survivability enhancements. (Mtech summer NTCC - 2023)
- Currently working on structure optimization using ANSYS, shape memory alloy modeling for actuator replacement, and conducting thermal analysis with ANSYS Thermo-Electric modules, along with impact analysis using explicit dynamics and LS-DYNA (Mtech NTCC 3 & 4)

INTERPERSONAL SKILLS

- Time management
- Critical thinking
- Problem-solving
- Decision-making
- Conflict resolution
- Positive attitude

WORKSHOPS

Coordinator of 3d printing and future advancement workshop May 2020.

LANGUAGES

- Tamil
- English
- Hindi

HOBBIES

- Cooking
- 3D modeling
- Bike Riding

INTERNSHIP

VENUS technology, Peenya industrial area, Bangalore
Mar 2021 - Jun 2021

- Collaborated with clients to understand design specifications, rectified material errors, and optimized designs for cost-effectiveness using 3D modeling software.
- Contributed to product development, played a key role in design optimization, and successfully executed [number] metal fabrication projects, emphasizing quality control and efficient project management.

Skills:

- 3D modeling and printing for design prototyping.
- Quality control, error rectification, and design optimization in metal fabrication.
- Project management and cross-functional collaboration.

Defense Research and Development Laboratory (DRDL), DRDO, Hyderabad
September 2023 - April 2024

- Applied topology optimization techniques to significantly reduce mass, volume, and surface area.
- Proficient in utilizing the ANSYS package, specializing in static structural analysis, buckling analysis, and model analysis. Expertise in creating 3D models using SolidWorks and ANSYS SpaceClaim.
- Successfully implemented redesigned models based on optimization data, resulting in a substantial enhancement in efficiency and performance.

Skills:

- ANSYS (Static Structural Analysis, Buckling Analysis, Model Analysis),SolidWorks
- Multiphase Fluid Flow Simulation using ANSYS Fluent
- Topology Optimization for Mass, Volume, and Area Reduction
- Expertise in Missile Section Joining Configuration

EXPERIENCE

Mechanical Design and Simulation Engineer Upwork
(December 2023 - Present)

- Specializing static structural analyses, optimization, buckling analyses, and model analyses using the ANSYS package and Applying Geometric Dimensioning and Tolerancing (GD&T) principles to enhance design accuracy.
- Proficient in software tools such as Solidworks, Fusion 360, CATIA V5, and CREO.
- Collaborating on projects that involve Fluent and CFX for fluid dynamics simulations.

DECLARATION

I hereby confirm that the information in this CV is accurate and complete to the best of my knowledge and belief