RESUME

A.L.R.PRATHYUSHA

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Career Objective

- "As a recent postgraduate in CAD/CAM specialization, I am eager to begin my career in a challenging and rewarding entry-level position, seeking for an opportunity to work in a collaborative team environment where I can apply my strong analytical skills to support the company's strategic goals."
- I am looking for opportunities to contribute to the company's design projects while enhancing my own skills in areas such as Design, Analysis, CNC Coding, Design and Brand identity development.

Degree	Specialization	Institute	Marks
M.Tech (2022 PASSED OUT)	CAD/CAM	VNR VIGNANA JYOTHI INSTITUTE OF ENGINEERING AND TECHNOLOGY (Affiliated to JNTU-H)	8.79 CGPA* (Yet to receive final SEM marks)
B.Tech (2015 PASSED OUT)	Mechanical Engineering	DMS SVH COLLEGE OF ENGINEERING	83.5%
XII	Physics, Mathematics& chemistry	NARAYANA EDUCATIONAL INSTITUTE	84.6%
X	-	NIRMALA HIGH SCHOOL	82.8%

Previous Experience

- Worked as teaching assistant in DMSVSH engineering college.

Technical subjects Taught	Year
Engineering Material Science, Mechanics of Solids, Machine Design	Aug 2015− Oct2016

Technical Skills

- HYPERMESH1D, 2D, 3D, Fatigue AutoCAD, CNC programming coding, solid works.
- ANSYS, CATIA, MASTERCAM, OPTISTRUCT, ALTAIR SOLIDTHINKING.

Project Details (M. TECH)	
Project	**STRUCTURAL OPTIMIZATION WITH OVERHANG CONSTRAINT FOR ADDITIVE MANUFACTURING OF AIRCRAFT COMPONENT USING TOPOLOGY OPTIMIZATION**
Description	Topology optimization (TO) be a precocious methodology which is developed to produce light-weight structures with supercilious performance within design constraints of the structures. But the results obtained from optimization software will be very complex to manufacture through convectional manufacturing techniques. Rapid evolution of additive manufacturing (AM) which add material layer by layer to fabricate components of unrivalled geometric complexity. Since from many years TO &AM have been performed separately, hence integrating these two techniques brings symbiosis results of obtaining light weight complex geometric components. This article focuses on topology optimized procedure for AM considering overhang constraint to fabricate a lightweight aircraft landing door bracket through (Selective laser melting) SLM process. The work mainly focuses on shape optimization, mass reduction & to produce light weight bracket where the mass is reduced from 0. 859 kg to 0.410 kg by about 52.27% without compromising structural and functional performance of the bracket. The optimized bracket is again redesigned which is light weight bracket that will be manufactured by SLM process. The study results indicate that, where additive manufacturing is considered, topology optimization is a viable way of minimizing product weight while retaining design standards.
Mini-Project Title	**AUTOMATIC GENERATION & TRANSFERRING OF PART PROGRAM TO CNC LATHE MACHINE BY USING DNC INTEGRATION**
Description	CAD software is used to translate computer-aided design (CAD) to manufacturing work-pieces with computer-aided manufacturing (CAM) on DNC machine. For a number of years, computer aided design (CAD) and computer aided manufacture (CAM) have existed separately. The product development transition from design to manufacturing is almost always a handoff of 3D design and tooling data and associated 2D drawings. Since designers and manufacturing engineers use different tools for handling design data—one uses CAD software to design the product and the other uses a CAM application to create tool paths and machine moulds. As two technologies of CAD and CAM are now being combined into unified CADCAM systems, a design can be developed and the manufacturing process controlled from start to finish, within a single system. Potential positive ramifications of the solution are much more widespread. The lack of communication in non-integrated approach is the basic problem that an integrated CAD/CAM platform solves. My work carries modelling of an industrial component (Stepped shaft) and generating an automatic part program for the component using MASTERCAM software, manual checking for any errors and then transferring the file to DNC machine by using a hardware communication and machining the component. This technological advancement offers many advantages that can help one boost productivity, control

	costs and resolve manufacturability issues.
Project Details (B. TECH)	
Project Title	**IMPROVING THE MILEAGE OF VEHICLES AND ELIMINATE CARBON EMISSIONS USING HHOFUEL IN AUTOMOBILES**
Description	The costs of fossil fuels are high and sources of fossil fuels are limited and may be deplete for future generation. Hence an alternate fuel HHO combination of hydrogen and oxygen molecules generated through the electrolysis of water. This technology of using HHO can be used with any type of fuel like petrol, gas, diesel etc.., which increases the mileage by less consumption of fuel. By this the fuel consumption will be less and carbon emissions which deplete the environment can be decreased with HHO.

Paper publications

- ***"A Review on Additive Manufacturing and Topology Optimization Process for Weight Reduction Studies in Various Industrial Applications***." Has been published on materials today proceedings journal which is available from March 2022.

- ***"3D printing Integration with Topology optimization for Innovative design and fabrication of Light Weight Aerospace Structures."*** has been published in proceedings published by **IEEE Xplore.**

Achievements

- Awarded Gold medal for Best outgoing student in M.Tech CAD-CAM.
- Received Best Project Award in M.Tech CAD CAM
- Won a prize and certificate of merit for scoring maximum marks in subject strength of materials in mechanical branch.
- Awarded for the Best performance in B.Tech Mechanical Engineering Branch.

Skills & Abilities

- Flexible and innovative.
- Excellent written and verbal communication skills.
- Confident, articulate, and professional speaking abilities (and experience).
- Empathic listener and persuasive speaker.

- Dynamic, results-oriented problem solver
- Easily understand and solve technical problems

Languages Known

English, Hindi, Telugu, Kannada.

Personal Information

Name : Amanchi Lakshmi Raga Prathyusha. (A.L.R Prathyusha)

Spouse's Name : Manuru Sitarama Murthy

Father's Name : A.V. Hanumantha Rao.

Mother's Name : A.S.N. Radhika.

Gender : Female.

I hereby confirm that the above information is true to the best of my knowledge.

Place: Bengaluru A L R PRATHYUSHA

Date: 04-04-2023

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