

AARATI BHARALE

Mechanical Engineer

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SKILLS

Technical

- **Mechanical Design:** CATIA, PTC Creo, SolidWorks, CAD Modeling, Design for Manufacturing (DFM)
- **Simulation & Analysis:** Ansys APDL, Finite Element Analysis (FEA)\
- **Digital Manufacturing:** Visual Components, Virtual Commissioning, Manufacturing Processes
- **Engineering:** Product Development, Process Optimization, Root Cause Analysis

CERTIFICATIONS / COURSES

Courses

- Manufacturing Process Selection and Design for Manufacturing
- Computer Integrated Manufacturing (CIM)

Publication

- **Role of 3D Printer in Additive Manufacturing** — *IRJET, Vol. 10, Issue 06, June 2023*

ACHIEVEMENTS

- National & State Level Prize — Additive Manufacturing Competition

LANGUAGES

English | Hindi | Marathi

PROFILE

Mechanical Engineer with a multidisciplinary background in **mechanical design, R&D, simulation, and manufacturing**. Hands-on experience in CAD modeling, FEA, virtual commissioning, and design optimization using **CATIA, PTC Creo, Visual Components, and Ansys APDL**. Focused on developing practical engineering solutions through **simulation-driven analysis, performance evaluation, and manufacturability considerations**.

WORK EXPERIENCE

Sagar Defence Engineering Ltd 2026 | Pune
Design & Development Engineer

- Designed and evaluated **deployable reflector configurations**, using simulation to compare performance and guide design selection.
- Developed mechanical components and a **flexible automated deployment structure**, focusing on compactness, functionality, and reliability.
- Iterated designs based on **simulation results and functional evaluation** to optimize the final configuration.

SimuSoft Technologies 2025 | Pune
Application Engineer

- Developed **Visual Components simulation models** for virtual commissioning and manufacturing-process validation.
- Analyzed simulation results to identify process issues and applied **root cause analysis** to improve validation accuracy.
- Supported **manufacturing-process optimization** through simulation-based evaluation and process analysis.

Leena Engineering Works 2022 | Solapur
Diploma Trainee

- Supported shop-floor manufacturing activities with practical exposure to **production workflows and manufacturing processes**.
- Assisted with **component inspection and quality-control activities**.

EDUCATION

Bachelor of Mechanical Engineering 2023 – 2026
MKSSS's Cummins College of Engineering for Women Pune | CGPA: 6.5

Diploma in Mechanical Engineering 2020 – 2023
A. G. Patil Polytechnic Institute Solapur | Percentage: 84.80%

PROJECT

Design of Speed Reducing Gear Box
PTC Creo | Ansys APDL | 2025

- Designed and modeled a speed-reducing gearbox in **PTC Creo** based on torque-transmission requirements.
- Performed **FEA using Ansys APDL** to evaluate gear/component stress distribution under defined loading conditions.
- Applied **Design for Manufacturing (DFM)** principles to improve manufacturability and simplify component design.