KUMARAN V

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SUMMARY

Design Engineer with 2+years of experience in 3D Part Design, Assembly, Sheet Metal, Drafting, Surface Modelling and Trims using CATIA V5&V6. Skilled in developing innovative, efficient designs with strong problem-solving ability. Aspiring to grow in a challenging role that values creativity, innovation, and continuous improvement.

EXPERIENCE

COMPANY : CASPRO SOLUTION - COIMBATORE
DESIGNATION : DESIGN ENGINEER
DURATION : Mar 2023 – Present

RESPONSIBILITIES

- **Design & Development:** Designed and optimized vehicle components for efficient manufacturing.
- **CAD Modeling:** Created and modified 3D models using CATIA V5, adhering to design specifications and industry standards.
- **Digital Mock-Up (DMU):** Performed clash, Clearance, and fit analysis for component.
- **Documentation:** Supported drafting team in preparing Bills of Materials (BOMs), Product Lifecycle Management (PLM), concept layouts and managing CAD data effectively.
- **Cross-Functional Collaboration:** Worked closely with cross-functional teams to align design objectives and deliver projects at the plant level within scheduled timelines.
- **GD&T APPLY:** Properly applied GD&T in drawings as per ASME Y14.5 & ISO Standards.

PROJECT HANDLING

A&B–PILLAR TRIMS(INTERIOR) – DESIGN AND DEVELOPMENT

- Design and develop A&B pillar interior plastic trims for passenger vehicles using CATIA V5&V6, ensuring compliance with OEM standards.
- Applied engineering features such as doghouses, ribs, locators, bosses, heat stakes, and snaps for strength and manufacturability. Conducted draft analysis, wall thickness analysis, and clearance checks for injection moulding feasibility.
- Conducted DMU analysis, and clash/clearance checks to validate integration with adjacent body panels and interior trims.
- Collaborated with cross-functional teams (Interiors, Manufacturing) to finalize mounting strategies and material selection.
- I applied GD&T, DFM/DFA Principles, and tolerance to achieve precision and cost-effective manufacturing.

DRIVETRAIN – DESIGN & DEVELOPMENT

- Design and developed drivetrain subcomponents including drive shaft subcomponent assembly, Rear axle component assembly for passenger vehicles using CATIA V5&V6 for optimized power transmission and durability.
- Modeled **U-joints, Slip joints, propeller shaft, yokes, flanges, and axle housings** ensuring correct fitment and durability.
- Created detailed 3D CAD models, GD&T drawings, and BOMs ensuring manufacturability and compliance with automotive standards (ASME Y14.5M, ISO).
- Vehicle System Integration - Collaborated with cross-functional teams to ensure proper alignment and compatibility of drivetrain components within the vehicle architecture.
- Performed Digital Mock-Up (DMU) analysis to verify clearances, assembly feasibility, and avoid interference in complex assemblies.
- I supported prototype build, testing, and design validation phases.

SOFTWARE KNOWN

- AUTOCAD • CATIA V5 • CATIA V6 • MS OFFICE

KEY COMPETENCIES

- 3D PART DESIGN
- DRAFTING & DETAILING
- SURFACE MODELLING
- ASSEMBLY
- GD&T APPLICATION
- TRIMS
- SHEET METAL
- REMASTERING
- BOM MANAGEMENT

ANALYSIS

- **DIGITAL MOCK – UP (DMU):** Clash, Clearance, Interference Checks
- **DRAFT ANALYSIS, WALL THICKNESS ANALYSIS**

EDUCATION

- **B.E MECHANICAL ENGINEERING** 2022
  ANNA UNIVERSITY/UNIVERSITY COLLEGE OF ENGINEERING – PANRUTI
  CGPA – 8.40
- **HSC** 2018
  VETRI VIKAAS BOYS HIGHER SECONDARY SCHOOL – NAMAKKAL
  PERCENTAGE – 70%
- **SSLC** 2016
  GOVERNMENT BOYS HIGHER SECONDARY SCHOOL – POLUR
  PERCENTAGE – 89.8%