

ASHISH KUMAR YADAV

AUTOMOBILE ENGINEER

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Bengaluru, India

SUMMARY

Automobile engineer with 3+ years of hands-on experience in product development, CAD design, prototyping, and engineering analysis. Skilled in drivetrain and vehicle component design as well as advanced 3D printing technologies, with proven ability to deliver validated, manufacturable products from concept to launch.

SKILLS

- CAD & Design Tools:**
 - Simulation & Analysis:**
 - Prototyping & Manufacturing:**
 - Mechanical Systems:**
 - Programming & Technical:**
 - Soft Skills:**
- DFA, DFM, AutoCAD, Sheet Metal Design, SolidWorks, Autodesk Inventor, Fusion 360, CATIA V5, Creo, Blender, 2D Drawings, SketchUp

Ansys Workbench, Ansys Icepak, CAE, Finite Element Analysis (FEA)

3D Printing, CNC Machining, Product Lifecycle Management

Drivetrain Design, Vehicle Systems, Mechanical Design & Development, Robotic Systems

Python, C++, G-code, HTML, CSS, Jinja, Raspberry Pi, Klipper Firmware, Embedded Systems Integration

Collaboration, Leadership, Communication, Problem-Solving

EXPERIENCE

Sytolab | Bengaluru, Karnataka

- Product Development Lead

Apr 2024 – Present

 - Led research & development for bio 3D printers; delivered 10+ prototypes through structured validation cycles.
 - Integrated Raspberry Pi and Klipper firmware with new motor drivers, tuned performance to reduce noise by about 50% ensuring smoother printer operation.
 - Designed UI/UX features for bio 3D printer slicer software, including a G-code bio editor, enhancing workflow efficiency and user experience for researchers.
- R&D Intern

Jan 2023 – Apr 2024

 - Designed extrusion subsystems and produced CNC and printed prototypes for functional validation.
 - Tutored 25 students in a collaborative design workshop, improving their skills in prototyping methodologies and product lifecycle processes.

Hybrutos Racing | Chennai, Tamil Nadu

- Drivetrain Head

Jan 2023 – Jan 2024

 - Supervised drivetrain design and component manufacturing for hybrid formula student racing projects.
 - Mentored 20+ junior team members in CAD and mechanical assembly.
- Drivetrain Engineer

Dec 2021 – Jan 2023

 - Contributed to the hybrid coupling planetary gearbox design, reducing the gear teeth surface wear by 20%.
 - Applied CAM tools for machining and design validation.
- Audi India | Bhopal, Madhya Pradesh

Apprentice Trainee

Jun 2023 – Jul 2023

 - Serviced powertrain, suspension, and brake systems on over 15 vehicles, following industry-standard procedures.
 - Gained hands-on experience with OBD diagnostics and serviceability factors in automotive component design.

EDUCATION

- B. Tech. in AUTOMOBILE ENGINEERING, 2024 [CGPA: 9.39]

SRM Institute of Science and Technology, KTR, Chennai
- HIGHER SECONDARY EDUCATION, 2019 [Percentage: 79.80]

St Xavier's Sr Sec Co-Ed School, Bhopal

PROJECTS

- Structural Design and Analysis of Autonomous Electric Two-Wheeler:** Designed an electric scooter chassis using Autodesk Inventor; performed structural analysis in Ansys Workbench and manufactured components through CNC machining and 3D printing.
- Electronic Cooling & Thermal Management (Capstone Program):** Evaluated thermal performance of electronics using Ansys Icepak, pinpointing critical hotspots that affected system reliability and proposed design modifications that lowered average component temperature by 8°C.
- 6-DOF Robotic Arm:** Designed a 6-DOF robotic arm in Autodesk Inventor, prototyped components using lathe machining and 3D printing and assembled with NEMA 17/11 motors and a planetary high-torque gearbox coupled using GT2 belts and pulleys.

CERTIFICATIONS & ACHIEVEMENTS

- Finite Element Analysis Convergence and Mesh Impedance – Coursera
- Advanced Automotive Systems Familiarisation of Commercial Vehicles – Ashok Leyland
- Electric Vehicle Chassis Design – Skyrrider Institutions
- Performance-based Scholarship – SRMIST
- Gold Medal – National Cyber Olympiad