

ADITYA VERMA

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Vision - To obtain a challenging role in Defense & Automotive industry where I can utilize my skills in Product Design and Development, which can add revenue to the company.



EDUCATION

<i>M. Tech (Combat Vehicle Technology), Defence Technology</i>	87.4%
Amity Institute of Defence Technology, Noida	2021 – 2023
<i>Bachelor of Engineering, Production and Industrial Engineering</i>	61.5 %
PEC University of Technology, Chandigarh	2013 - 2017
<i>Senior Secondary Examination, Central Board of Secondary Education</i>	87.4 %
St. Joseph's Sr. Sec School, Kanpur	2013
<i>Higher Secondary Examination, Central Board of Secondary Education</i>	92 %
The Scindia School, Gwalior	2011

INDUSTRIAL PROJECT

Combat Vehicle Research & Development Establishment (DRDO), Chennai August 2022 – May 2023

- Development and design validation of multi-tank fuel system for heavy, cross country capable light tank.
 - Benchmarked BIW process for manufacturing methods, joining technologies and corrosion study.
 - Conducted safety and protection studies for the system using CFD and FEM tools, ensuring the safety of the crew.
 - Conducted thorough system and component analysis to identify areas for improvement through the following-
 - Fatigue analysis
 - CFD Sloshing analysis.
 - 1D Pressure drop analysis.
 - Impact analysis
 - Structural & Weldment analysis
 - Thermal analysis for Return Fuel line
 - Experimentally tested prototype tank for deformation under high stress for analysis accuracy and weld strength.
 - Developed driving linkages for powerpack control in ADAMS, improving the efficiency of the system.
 - Design verification of hull and other structural components at prototype stage.
 - Published research paper on structural loading of pressure vessel storing fuel in defense science journal.
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PROFESSIONAL EXPERIENCE

Magna Steyr, Pune

June 2019 – Dec 2021

Design Engineer

Responsibilities

- CAD designing and validation of complete automotive body parts like BIW, trims, electrical harness, in Catia and NX.
- Ensuring adherence to safety and quality standards while understanding real-life applications and converting them to 3D designs.
- Conducting feasibility checks for part production and assembly, collaborating with other departments like Electrical, BIW, Chassis, etc., and implementing new designs.
- Communicating with international customers daily, addressing their queries and holding discussions.
- Coded macros in Catia for software automation capabilities.

Bharat Forge Ltd, Pune

July 2017 - May 2018

GET (Graduate Engineer Trainee)

Responsibilities

- Designed Forgeable Aerospace Components in Catia and NX.
 - Led, estimated, and processed, feasibility of new enquiries for aerospace and gas turbine components for major Aerospace giants.
 - Analyzed customer designs in CAD and conducted process simulations to determine feasibility and estimate material usage.
 - Handled, design and process-related queries from the customers engineering team for process finalization.
 - Generated regular data according to aerospace and customer standards for each inquiry to support part development, such as PPAP, FMEA, Process Simulation PPT, etc.
 - Documented and analyzed results for annual audits to be an aerospace supplier for AS Standards, NADCAP, etc., as well as for regular audits from new and existing customers.
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RESEARCH EXPERIENCE

Amity Institute of Defence Technology, Noida

October 2021 – August 2022

- Ballistic Simulation and testing for Composite Armour modules in Ls Dyna
- Prototype for Pneumatic actuated gun, CAD design and development

- Design, testing and validation for Tactical armoured vest.
- Active Protection System Design and development

Magna Steyr, Pune

June 2019 – Dec 2021

- Conversion of sheet metal exterior body parts to plastic for weight optimization.
- Studying the application of Morphing or warpage in Injection molded parts during cooling.

Bharat Forge Ltd., Pune

July 2017 - May 2018

- Identifying parts which can be manufactured using additive layer manufacturing for aerospace sector pertaining to its desired end properties.

BFL CDP, Ennepetal

March 2016- June 2016

- Research on FEA Method for simulation software, H and P method meshing, etc. Von mises stress strain simulation, static and dynamic loading. Weight reduction of steering knuckle of commercial trucks for MAN, Scania, Daimler, etc.

PROJECTS

PEC, Chandigarh

January 2017 – May 2017

- Constructed an apparatus to measure Creep in various specimens (Jan 2017 – May 2017)
- Built an electromagnetic braking system for general application, tested and analysed performance. (Jan 2017 – May 2017)
- Casted Juicer crankshaft for Final Workshop Project, using crafted wooden pattern (May 2014 – June 2014)
- Manufactured a working prototype of “Air Conditioner” for Engineering Design curriculum requirement (Jan 2014 – May 2014)

INTERNSHIPS

Bharat Forge CDP, Ennepetal, Germany

March 2016 – June 2016

- Forging equipment, tooling, & manufacturing process for pistons, crankshafts, steering knuckles, etc.
- 3-D designing of production parts and designs of dies for forging.
- Application of FEA simulation in forging process using Forge Nxt, for process validation.
- Programming PLCs to automate Production Lines
- Programming Industrial Robots and their maintenance.

Kalyani Maxion Wheels, Chakan, India

January 2016 – February 2016

- Studying Large Manufacturing Lines and its components
- Understood wheel Rims production process for commercial and passenger vehicles.
- Analysed use of Aluminium wheel rims in tanks for weight reduction.

TECHNICAL SKILLS

- Design Software : CATIA R26, UG NX 11, Pro-E, Creo, AutoCAD
- Simulation Software : Ls Dyna, Abaqus, Ansys, Ansys Fluent, Adams, Hypermesh, Forge NxT
- Programming : C, C++, VBscript
- Misc. Software : MS Office, Photoshop, Dreamweaver, HTML, Adobe Flash, Unity 3D
- Siemens Simatic Manager for PLC programming
- KUKA robot programming for industrial automation
- Excellent Verbal and Technical Report Writing Skills

TRAINING AND CERTIFICATIONS

- Received training for NADCAP Audits at Bharat Forge as an Aerospace Supplier, Pune (2018)
- Attended Eurosatory (Defence Expo) in Paris (2016)
- Earned certification in winning Basketball tournament at NIT, Kurukshetra (2014)
- Attended Auto Expo in Pragati Maidan, Delhi (2010, 2012, 2014)
- Awarded Scholars certificate of Excellence in Grade X, The Scindia School (2011)

ACHIEVEMENTS

- Best Team Award (Magna Steyr - September 2021)
- Promoted to Design engineer (Magna Steyr - September 2020)
- Received 40 percent scholarship from the school for the Excellent Performance in Grade X (2011)
- Received 50 percent scholarship from FIITJEE (2013)
- Participated in inter-department football tournament at Magna Steyr; Pune, and won. (June2019- September 2019)
- Started a startup in college in the Second year for customized clothing named Quadb with 3 of my classmates (2014) (Quadb.in)