ANSHUL AGGRWAL

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PROFILE

As a **Mechanical Designer** with **5 years** of experience, I have expertise in product design & development, project management, manufacturing support, and business growth. I am skilled in **Solidworks, CATIA V5, Inventor**, **AutoCAD**, engineering calculations, **2D drawings**, project management, and design analysis.

SKILLS

- **Tools- Solidworks, AutoCAD, CATIAV5, Inventor, Fusion 360, SAP/ERP.**
- **Processes**- **Six Sigma, Lean, PPAP, APQP, VOC, DFMEA, DFM/A, PFMEA, NAI.**
- **Plastic Mfg. - Injection Modelling, Thermoforming, Vacuum forming, SLS, SLA,3D Printing**
- **Metal Mfg. – Stamping, Casting, Welding, Soldering, Machining**
- Certified SolidWorks Professional **(CSWP)**, with **CSWPA** (Surfacing)
- Proficient in 3D CAD (**Concept design& development, Surfacing, Parametric modeling, Sheet metal design, Assembly, Weldments, Reverse engineering**).
- Experience in **NPD** and Design for manufacturing **DFX**.
- Ability to read, interpret, and analyze **2D** technical **drawings** and **blueprints** (GD&T).
- Prototyping skills include **3D scanning** and **Rapid Prototyping (SLS, SLA,3D printing).**
- Knowledge of **different manufacturing processes & materials**.
- Exposure to **Kinematics and simulation** (**FEA**, Mold Flow, Stress and Load study, **MBD** Analysis).
- Proficiency in rendering, animations, and visualization software like **Keyshot** and **Blender.**
- Utilized **Adobe Suite (Illustrator, Photoshop)** to enhance renders and **product visualization**.
- Familiarity with mold design for **Thermoforming** and **Injection molding.**
- Ability to **manage projects** and meet project timelines and deadlines.
- Strong **problem-solving** and critical-thinking skills.

EXPERIENCE

(Daymak) Avvenire Electric Vehicle Inc. 15 Curity Ave, Toronto, M4B1X4 (April 2023 - Feb 2024)

Mechanical Designer

- Led the successful development of **3 all-electric automotive vehicles** within a **9-month** timeframe. Responsibilities included body panel **(A- Class) surfacing**, reverse engineering, and rapid prototyping SLS & 3D printing, utilizing tools such as Solidworks, Inventor, and Alias.
- Managed and developed **Top-level assemblies** comprising mechanical and electrical components, incorporating body panels. Utilized **parametric modeling** techniques to create parts and generate **assembly drawings.**
- **PLM** - Prepared **2D engineering specifications** and **Part drawings** for suppliers and vendors for the cost-reduced components.
- **Analysis**- Performed **(FEA)** and **(MBD)** analysis on the door assembly to accurately determine load distribution and the vehicle's center of mass. This analysis ensured the **structural integrity** and optimal performance of the vehicle.
- **Product Visualization**- Generated **4K renders**, **Animations**, and turntables for dynamic, real-time visualization of **conceptual designs** and created various **marketing materials**, including logo stickers, advertising brochures, and marketing posts by using Keyshot, Blender, and Adobe Creative Cloud.

(Saiga Parts) Centroid Automotive Solutions Pvt. Ltd. Karnal, India (Nov 2019 - Jan 2022)

Mechanical Designer

- Facilitate **new product development (NPD)** and **design for manufacturability/ experiments/cost/reliability (DFXs)** as per the customer needs.
- **3D modeled surface designs** (B-Class Surfacing), Releasing **3D & 2D Manufacturing Drawings** and **High-quality renderings** (HQR) for the 50+ automotive styling parts
- Developed different products using **Keyshot** and **Blender** to boost the company's sales.
- Made Molds for **Vacuum Forming Mach**., **Injection Molding Mach**. and Designing **bed layouts** for production.
- Knowledge of CNC programming (With hands-on experience with **Solid Edge**.
- **Plastic Product Lifecycle Management**: Initiated and maintained the **Design Failure Mode and Effects Analysis** (DFMEA)

- Drafted the **engineering specification** and **engineering drawing** with **BOM** for different components and conducted a review of **process flow** to meet performance, quality, cost, and capacity requirements.
- Develop **Standard Operating Procedures** (SOP) for seamless production line flow to increase productivity and decrease per-piece cost

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Alstone Industries. Jaipur, India (Aug 2018 – Nov 2019)

Jr Mechanical Designer

- Designed the Dust collecting bin for **Extruder**'s cutting machine to reduce cutting errors and collect waste to reuse.
- Facilitate **2D Drawing of machine parts** to the tool room and vendors for manufacturing.
- Designed the Tool Room setup and implemented **Lean Manufacturing Principles**,**5S, Poka Yoke, KAIZEN, etc**., which reduces the external cost for tool making and maintenance jobs.
- Worked with **pneumatic conveyor-type systems** and designed **basic structures** to increase productivity.
- Troubleshoot, participating in **QA** and other activities relating to the development of technology utilized in the packaging unit of the Silicon filling area.

EDUCATION

Conestoga College Guelph, ON (Jan 2022 – April 2023)
Post-Graduation Certificate |
Program: Applied Manufacturing Management in Design Integration

University Institute of Engineering and Technology Kurukshetra, India (Aug 2014 – July 2018)
Bachelor of Science & Technology |
Program: Mechanical Engineering

PROJECTS

Corona Permanent Display.

- Developed a permanent wooden display with specially designed racks to hold 8 corrugated boxes containing 6 cans of Corona beer each and 18 Corona beer bottle boxes. The display also features a hanging sign that is suspended using a natural rope.
- The display was designed using Solidworks/AristoCAD software, incorporating detailed pricing CAD information and dimensional specifications.
- The display was enhanced with realistic renders created using Keyshot, resulting in an engaging and visually appealing representation that effectively captured customers' attention.

Disinfectant Tunnel.

- I created and built an aluminum structure featuring a centrifugal pump unit precisely adjusted to atomize sanitizing liquid through 0.35 atomizers. The structure was designed with human ergonomics in mind and placed within a tunnel to combat the COVID-19 virus effectively.
- Motion sensors with a 15-second delay timer were incorporated into the system to automate the process and ensure the effective elimination of the virus.
- Using 3D models and advertising renderings, promotional materials were created to enhance sales and effectively market the product.

CERTIFICATION

- Certified bachelor's in mechanical engineering (WES).
- Certified Solidworks Professional (CSWP).
- Certified Solidworks Professional Advance (CSWPA) Surfacing.
- Certified Worker Health and Safety Awareness (OHSA)
- Ontario G licence with clear record