ADRIAN FELIX

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Professional summary:

15+ years of experience in Automotive domain, **Expertise in exterior** lighting such as RCL, Fog Lights, applique, integrated and standalone reflex:

- Led the strategic innovation initiative within a multidisciplinary R&D team focusing on automotive lighting systems, driving to the conception of five groundbreaking taillight projects for major automotive manufacturers.
- Successfully led complex lighting programs for OEMs, such as **VW, Mercedes-Benz, BMW, JLR and AUDI.**
- Managing styling feasibility and ensuring compliance with legal requirements **ECE/SAE (FMVSS)**
- Proficient in advanced CAD tools (CATIA V5, NX, SolidWorks)
- Extensive experience with tooling feasibility, master section studies, MFA (mfr) interpretation, fixing points or attachments definition and prototype builds.
- Adept at collaborating with cross-functional teams across optical, EE, validation, simulation, SW/HW, mechanical, SDE/SQA, QA and manufacturing functions to ensure successful lunch and on-time project delivery.
- Expertise in **cross-functional** team co-ordination with comprehensive understanding of product lifecycle, design, engineering, Toolshop, Supplier, Plants etc.
- Understanding of optics simulation analysis and lab photometrical report.
- Highly skilled in advanced CAD design (**CATIA V5**), including 3D & 2D, reverse engineering —benchmarking oriented.
- Expertise in **DFMEA, DV, PV, DVP&R, BOM** development, prototype builds, and regulatory tests for including SAE (**FMVSS), ECE**, and **CMVSS.**
- I possess extensive experience in managing complex product data using **PLM/PDM** tools like **Teamcenter**, CIM DB / EPDM, change management processes (**DCP, ECR, ECO and ECN**) and Engineering documentation
- Expertise in **Tolerance-Stack up** and **GD&T**
- Knowledge of **FEA, CFD, RFQ, VAVE, TVM, DFM, DFA, PPAP, APQP, FMVSS, CMVSS, ECE, DMU, LED, OLED & Flexible (Curved) Digital OLED**
- Benchmarking systematic analysis processes for inspiring new ideas and innovations by examining advanced features or technologies and performance.
- Good understanding of manufacturing Processes, specification creation, tooling and material selection for Injection Molding, Plastics, Composites
- Excellent knowledge in Rendering (Keyshot), Scanning (Polyworks), SharePoint, KBE Tools (Knowledge based Engineering), LCA on Carbon footprint for Automotive components, AI for product development
- Excellent communication and interpersonal skills.

Professional Experience:

Marelli, Tolmezzo, UD, Italy ***Jan 2016 – Till date***

Sr. Project Engineering Lead ***SW Tools - Catia V5, NX, Tc PLM, MS Office***

- Design and development of lighting components, including RCL, Applique, Reflex, fog, CHMSL, etc.
- Multiple OEM programs like VW Passat (411 GP), Mercedes-Benz (X-V-C 167) BMW (G42/87), JLR (L462), and AUDI (AU546/616).
- Coordination with cross-functional teams, Studio, Design, optical, CAE, (Thermal, vibration, and mold flow simulation), EE, Materials etc.
- Facilitated TDRs with OEM/Customer, Internal and Supplier
- Design-related activities - Master sections, design proposals, thermal management studies, feasibility checks, data management, and support for the product release process.
- Review of optical simulation results to ensure alignment with OEM targeted goals and provide feedback for optimization in the design process.
- Utilized CATIA V5 to perform design changes, including benchmarking, concept evaluation, detailed design, design verification, product validation, and product launch.
- Evaluations of designs, plastic guidelines, GD&T specifications, attachment schema and manufacturing feasibility.
- Development of project schedules, tracked progress, and ensured effective resource management, suppliers, and stakeholders.
- Detailed engineering drawings, capturing Tolerances, GD&T to facilitate efficient production processes.
- DFMEA, DVP&R, DV and PV testing, mandatory regulatory tests prior to vehicle builds and addressed non-compliance issues.
- Proto build, resolving build issues and coordinating with teams during tooling trials, photometry tests, and final modifications.
- Prepared regulatory compliance documents, conducted studies, and supported the certification process
- Facilitated cross-functional meetings with teams across different Geographies like NA, Europe, and India
- 3D and 2D drawings in Teamcenter, Feasibility studies, clash analysis, raised change management requests (CCD/CN)
- Worked with Supplier to ensure all tooling checks were completed at key milestones, including quoting, feasibility, design release, and OK-to-tool stages.
- TVM initiatives to optimize product quality and costs
- Lifecycle assessments (LCA) for automotive lamps, supporting the carbon footprint requirements.
- Introduction of Pre-release Verification (PRV) process - which in turn lead to a lot of cost saving tools and issues getting resolved before OKTT.

Project Highlights

Quick development: Congratulated by AUDI on a global Lighting event by pointing out that Marelli Tolmezzo has a fast reactive problem-solving way and takes the ownership of the development showing innovative ideas. This directly contributed to a 20% increase in customer nominations for a bundle project due to stronger satisfaction.

Successfully launch of: Mercedes Benz (Bundle) project by keeping below the budget with most design changes Implemented during the simultaneous engineering review with our suppliers, avoiding ECRs after the OK to Mill which would have an impact on +30K € in modifications and time investing for getting the INI approvals from the top management.

Optical-Mechanical Modular: Patented solution for 3 different platform code vehicles. Given a saving of €2.1M+ considering the life product cycle of the 3 vehicles during its 4 year before facelift (re-styling) starts.

Automotive Lighting, Cd Juarez, Chih. Mexico **May 2014 – Feb 2016**

Project Engineer ***SW Tools - Catia V5, NX, PDM, MS Office***

- Design and development of lighting components, such as RCL, Fog and Reflexs.
- Enhanced product designs for manufacturability and cost-effectiveness on high-budget projects ($3M+).
- Maintained accountability for ECRs-ECNs until Implementation and the collection of resulting data.
- Creation and review 3D CAD of complex geometry using CATIA V5 by surfacing modeling modules
- Review drawings, BOMs, DFM/DFA and DFMEA.
- Coordinated with the validation team to ensure the product met legal and customer requirements.
- Creation of deviation report using Polyworks software to confirm the Quality of Scan and CAD
- SPOC for interaction with overseas engineering team for out-of-site project
- Complete responsibility for deliverable, Data management, scheduling & tracking and knowledge sharing

Delphi Automotive Systems, ***Cd Juarez, Chih. Mexico*** **Jan 2012 – Jul 2014**

Mechanical Design Engineer ***SW Tools - Catia V5, NX, Ansys, Tc PLM, MS Office***

- Development of concept CAD model in CATIA V5.
- Generate 3D parametric data, created 2D drawings per GD&T requirements and released production drawings for prototypes in a timely manner.
- Creation of BOM and identify the manufacturing process including heat treatment and surface protections.
- Facilitated product design improvements for industrialization and cost reduction across multiple products, such as the Honda MDX, GM GMT K2XX, Volkswagen MQB 2012, and Toyota N300.
- Used multiple modules like sheet metal, drafting (GD&T), modeling, and FEA, to evaluate and achieve the desired and optimized design.
- Experienced with heat exchangers (Radiators, Condensers, Charge air coolers, oil coolers, heaters, evaporators, and AC Lines), using metal and plastic materials.
- Assisted with a range of other daily tasks, including providing global support in Finite Element Analysis, stack-up analysis, BOM update/release, blank & bulk size calculations, process tolerances, and ECR/ECN.
- Technologies applied: Plastic Materials (Thermoset & Thermoplastic), CAD (UG NX & CATIA V5), CAE (ANSYS), and Manufacturing (Single Molding, Clenching, Stamping, Extrusion, Brazing, Laser Welding, and Rolling Machine).

Diseños Industriales, Cd Juárez, Chih. Mexico ***Feb 2010 – Jul 2011***

3D Designer and CAM Programmer ***Tools- SolidWorks, CAMworks, CNC***

- Create first-hand experience in a design and manufacturing setting as a 3D designer, Drafter, and CAM Programmer.
- Provided new industrial designs for projects of Diseños Industriales.
- Delivered designs for automation machines, holders for harnesses, molds, fixtures, & industrial workstations, and strived on fixtures, jigs, and injection molds.
- Technologies: Manufacturing (Lathing, Milling, Grinding, CNC Machining, & Conventional Machining), and CAD SW (Solidworks 2009 and CAMworks 2009), Misc. (GD&T Layout, NC Coding, Tolerance Analysis, 3D Parametric Data).

Tools and Skills: Automotive Exterior Design CAD – CATIA V5, UG/NX, Solidworks, ANSYS, Teamcenter, Project Management, Product Life Cycle Management, New Product Development, Engineering Change Management, Geometric Dimension & Tolerance (GD&T), Design Engineering, Project Planning, Cost Modeling, Stack Up Analysis, Analysis Design for Manufacturing (DFM), Kaizen, Validation Protocols, Risk Management, ISO Standards, Technical Presentations, 3D Parametric Design, Prototype Design, Production Drawings BOM, DFMEA, VA/VE, Benchmarking, Reverse engineering, VAVE, Product cost Optimization, AI in Product Development, Microsoft Office Suite (Excel, PowerPoint, Word), Polyworks, KBE, SharePoint

Academics:

Bachelor in: Product Industrial Design

Certification:

Tolmezzo Tool Competence Center – Design for Injection Plastic molded parts

For design products that are better suited for this specific manufacturing method, resulting in cost- effective and high-quality products.

Daniel P. Bauer, Jr (SAE, AESQ, ASME Certified Senior) – GD&T Fundamentals

For design and manufacturing process improvements, leading to more efficient and cost-effective product development.

Delphi MTC – GD&T Stack Up

Understanding GD&T stack up helps to achieve precision in the design and manufacturing process.

Accomplishments:

- Design and pre-production release for TOYOTA Tacoma condenser, implementing plastic brackets instead of aluminum ones (as on RFQ) after doing FEA analysis which demonstrates that PC+ABS as rigid shape could replace metallic design, given a cost impact reduction over significant +$400K over the whole life cycle of the truck.

- Successfully launch of Mercedes Benz (Bundle) project by keeping below the budget with most design changes implemented during the simultaneous engineering review with our suppliers, avoiding ECRs after the OK to Mill which would have an impact on +30K € in modifications and time investing for getting the INI approvals from the top management.

- Optical-Mechanical Modular Patented solution for 3 different platform code vehicles. Given a saving of €2.1M+ considering the life product cycle of the 3 vehicles during its 4 year before facelift (re-styling) starts.

- Contribution on the development of a Tolerance Calculation Tool, instead of buying a commercial solution, which contributed to a saving of 15K € software price, plus 5k € license every year.