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Top Skills

Teamwork
Microsoft Office
English

Languages

English (Full Professional)

Certifications

SOLIDWORKS Mechanical Design
Associate

edX Verified Certificate for
Hypersonics - from shock waves to
scramjets

Solidworks Mechanical Design
Professional

Dan Radulescu

4 years experience as a mechanical R&D engineer
Braşov

Summary

Mechanical engineer. Leader of a small team. Challenge driven. Passion for CFD simulations. Space nerd, wannabe dancer and horse lover. Aiming and working towards large scale impact engineering.

Experience

Magneti Marelli

Mechanical Design Engineer

February 2018 - Present (2 years 7 months)

Cluj County, Romania

Assigned main responsibilities in GDI department where my activities include but are not limited to:

- Fixture/tooling development in close relation with the proto-shop for injector assembly/part testing and validation
- 2000h+ of CATIA V5 CAD software Part/Assembly and Shape Generation Design)
- Designated reference person for Cluj site GDI activity
- Over 30 injector seat spray feasibility studies & calibration drawings for EDM & Femto Laser Drilling, performed on company proprietary sealing seats.
- Produced tens of part/assembly/outline manufacturing drawings for injectors assemblies and components in accordance with company & GD&T standards.
- Workflow process efficiency improvement activity by creating a streamlined workflow pattern that includes 3D CAD design templates, VBA excel calculation files & procedure support documentation.

Upwork

Freelance Product Designer

July 2014 - Present (6 years 2 months)

Brasov County, Romania

Product design & development of consumer products in several areas such as professional bow hunting and watersports with US based clients such as DJ Belanger Innovations LLC & Aeolian Kitesurfing LLC.

As a lead designer, my responsibilities included:

- Part & assembly design of several iterations of a mechanical arrow broadhead
- Ideation, sketching and preparing for 3D print of several iterations of components for a hybrid (electric-manual) triple action air pump
- Collaborating with US & Taiwan based factories for prototype manufacturing
- Creating technical drawings for metal machined components
- Design of 3D printed silicon molds for prototype components
- Packaging and promotional graphics design (banners/brochures/flyers)
- Part design for injection molding
- Preparation of parts/assemblies for easier FDM and SLA 3D printing

Groupe Renault

Vehicle Architecture Conceptor

October 2017 - February 2018 (5 months)

Bucharest, Romania

- 3D CAD development of automotive parts belonging to the underbody perimeter of the company's vehicles, using CATIA V6
- cross-team collaboration with other internal departments
- Technical studies to ensure compliance with both supplier and internal rules

Advanced Mechatronik Technologies

1 year 11 months

Mechanical Design Team Leader

February 2017 - October 2017 (9 months)

Brasov County, Romania

I was awarded the responsibility to lead the Romanian design team for the activity centered on the Thermolift Gen.3 Heat Pump.

Together with 2 young driven engineers we supported the projects' design vision while bringing value through innovative subsystems improvements.

Activities:

- Development of numerous design concepts in CREO 3 aiming to ensure function and reduce cost.
- Ensured scheduled meetings with the design lead to determine the best design for manufacturing processes and required GD&T.
- Produced numerous high complexity drawings and took part in the drawing release process.

- Performed several thermal CFD simulations to vet out concept ideas for our heat exchangers
- Led meetings with US team to local activity, report results and brainstorm new concepts.
- Acted as a trusted reference in relation to local manufacturing partners.
- Implemented workflow optimization actions which led to improved communications & results delivery times.

Mechanical Engineer

December 2015 - October 2017 (1 year 11 months)

Brasov County, Romania

CAD design design on automotive project: redesign for smaller scale experimental opposed piston, opposed cylinder engine for US based client EcoMotors.

Concept work on several components such as the oil sump, side, and other static components

Assembly work on several levels, making sure the engine can be assembled and it can be done in an easy fashion.

Gas/Liquid core geometry extraction & clean-up for further CFD simulation purposes

Inosonic IFPS

Lead Simulation Engineer

March 2016 - January 2017 (11 months)

Brasov County, Romania

Continuation on Thermolift Inc. project of Generation 2 Heat Pump from previous employer and also taking new responsibilities on public funded Two Stroke project which focused on researching an alternative means of propulsion by taking advantage of pressure waves power.

- CFD simulations & post processing using Lattice Boltzmann based software for flow (pressure/velocity) and heat transfer (gas to gas & gas to solid)
- Set Up & Running of structural & thermal FEA simulations using MSC Patran & Nastran for processing and solving
- CAD geometry clean-up and preparation for simulation purposes
- Simulation, concept selection and CAD design of Helium-Water heat exchanger
- Simulation results presentation in meeting for client
- Keeping in contact and close collaboration with local factory for components manufacturing

BlueStreamline

FSAE Student Racing Team Member - Transmission & Air Intake
November 2012 - July 2014 (1 year 9 months)

In my second year of university @ Transilvania University of Brasov, I engaged the international student racing competition Formula Student.

⇒ FIRST SEASON - TRANSMISSION Assistant Mechanical Design

- Research & ideation of an improved transmission solution for the upcoming season
- CAD design of differential adapters, axels, hubs, spacers, sprockets, supports and tripod adapters
- Design For Manufacturing & working together with the FEA department for part optimizations
- CAD Assembly, transmission sub-assembly integration into the general assembly, efficient part numbering & bill of materials
- Design Report & Cost report
- Contact manufacturers and implication in the actual manufacturing process
- Assembly & servicing of the manufactured parts

⇒ SECOND SEASON - AIR INTAKE Lead Design & Manufacturing

- Research & ideation of a hybrid natural aspirated & turbo capable air intake assembly for the upcoming season
- CAD design of multiple prototypes
- CFD simulations in SolidWorks Flow simulator, for transient manifold flow, observing pressures & air velocities.
- Design for Manufacturing using 3D printed molds.
- 1 month work stage @ Eurocopter's factory in Brasov to produce Fiberglass & Carbon fiber parts using 3D printed & wax molds

Education

University of Brighton

Erasmus Student Exchange - 1 Year, Industrial and Product
Design · (2014 - 2015)

Universitatea Transilvania din Braşov

