Devin Charles Prescott

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Objective Statement

Seeking a permanent Computational Scientist / Researcher (CFD) or Senior Mechanical Engineering role.

Summary

Experienced Mechanical Engineer with a 9 year work history. Skilled in analytical and CAD software packages ANSYS, AMESIM, Python, MATLAB, Simulink, Solidworks, ProEngineer Creo, and Unigraphics NX.

Responsible professional with a B.S. in Mechanical Engineering and an expected Master's in Numerical Simulation. Strong research and development, structured root cause analysis, and problem solving skills. Team player with excellent interpersonal and communication skills, and a strong leadership drive.

Technical Skills

- ANSYS Fluent, ICEM, Solidworks Simulation, OpenFOAM, COMSOL, AMESIM
- Solidworks, ProEngineer Wildfile & Creo, Unigraphics NX, Spaceclaim
- Python, Matlab, Simulink, Julia, R, Jupyter Notebooks, Linux, C++
- Manual Milling & Turning, Surface Grinding, Epoxy Layup, Prototype Fabrication & Assembly

Certificate Training

- Six Sigma Green Belt: Robust Engineering
- Shainin Red X Journeyman
- AIAG DFMEA
- Machining Principles
- Advanced Concepts of GD&T
- Hydraulic Components & Systems

Professional Experience

Lead Product Engineer

Delphi Technologies (Tier 1 Automotive) Aug 2012 – Oct 2018

- Lead engineer on a new-development program which produced approximately 1.25M - 1.7M units per year at R90C90; performed Solidworks and NX design work, ANSYS FEA & CFD and Simulink analysis
- Independently developed a Constrained, Mixed Integer, Nonlinear Optimization program with SOM option to optimize life of valve springs and minimize mass and imbalance of valve-train components
- Independently developed a Matlab Monte Carlo 3D tolerance stack tool which accurately predicted First Time Quality fallout to 1%, and inspired design changes, reducing FTQ from 15% to less than 2%
- Applied Six Sigma Robust Engineering training to optimize process parameters for a production test cell, reducing a 5-18% scrap rate to zero
- Led a team to prevent a customer shutdown by applying Shainin Red-X Journeyman training to systematically identifying, verifying, and correcting the root cause slowing our production line
- Hosted bi-weekly customer calls fielding questions on design, test and validation, materials analysis, DFMEA reviews, and component failures in the field
- Developed a program which parsed the SOR into technical requirements and with DFMEA linkage and generated an automated design concept in Solidworks, which shorted RFQ response to 2 weeks

Product Engineer Co-Op

General Dynamics Armament and Technical Products Mar 2010 – Nov 2010

- Designed in Creo a Receiver & Forward Grip for a Light Weight, High Accuracy Medium Machine Gun
- Designed a Mann Barrel Static Fire Test system in ProEngineer Creo:
  - Created and conducted test plan, collected and processed data on deformation & hardening of cases; pressure, temperature, and firing loads at firing range and in Materials Lab
- Designed and executed test to assess tripod stiffness and damping during fire-recoil cycle; conducted post processing and analysis of markers in high speed video
- Designed and executed test of projectile-to-case retention during full rate of fire for various interference fits
- Performed strain gauge Bearing and Hoop Stress measurements of the breach under proof load

Design Engineer, Co-op
Nov 2009 – Jan 2010

Amphenol Aerospace / Amphenol AIO
May 2008 – Dec 2008
May 2007 – Sep 2007

- Designed an insulation displacement and optical fiber interconnect for deep sea, oil and gas exploration sensor array
- Designed prototype injection mold under supervision of a senior tooling engineer
- Collaborated closely with high precision stamping and injection molding suppliers
- Integrated ProEngineer Creo with Mathcad to design a thin film solar interconnect system to optimize field installation and heat dissipation
- Designed and conducted thermal analysis of solar junction box system and pin heat sink using novel heat dissipating plastics
- Designed high power interconnects used in the commercial train industry; modeled and drafted in ProEngineer Creo previously blueprinted drawings to maintain an up to date model library

Design Engineer, Intern
Medical Coaches
May 2006 – Sep 2006

- Created an Efficient Order Quantity report under supervision of Engineering VP; final design concept detailing all aspects of material use, scrap, transport, and storage; projected 30% annual savings
- Modeled & drafted interior of mobile X-ray scanning van in Solidworks; wrote technical users manual
- Created new design for chiller mounting system for semi-trailers to improve factory worker safety; wrote formal installation procedure
- Designed a lock system for expanding trailer walls to reduce susceptibility to binding while in transport

Project Engineering Lead
RIT Senior Design Project

- Worked as part of a multidisciplinary team to design the generator side of a transcutaneous wireless power implant device
- Performed magnetostatic attraction force and torque simulations, and coupled heat transfer and CFD simulations in Comsol Multiphysics coupled with Matlab; results showed high correlation to test data
- Fabricated magnetic armatures, implant prototype, and in-vitro test chamber

Education

Master's Degree in Numerical Simulation – Computational Fluid Dynamics
Universidad Politécnica de Madrid
Expected February 2020

Relevant Courses: Fundamentals and Application of Computational Fluid Dynamics, Multiphase Flows, Turbulent Flows

Bachelor of Science in Mechanical Engineering
Rochester Institute of Technology
June 2013

Relevant Courses: Transport Phenomena, Fluid Mechanics of Turbomachinery, System Dynamics, Fuel Cell Technology, Introduction to Automotive Design, Internal Combustion Engines, Numerical Methods, Advanced Computational Techniques

References

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