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Objective

To undertake the responsibilities and challenges of a position in project-oriented engineering. The position would ideally incorporate project management, problem solving and technical innovations.

Special Skills

Degree: B.S., Mechanical Engineering
CAE Packages: Catia, Pro-Engineer, SolidWorks, Cosmos, ANSYS, AutoCAD, Anvil 5000, CadKey
Languages: FORTRAN, Pascal, BASIC, APL
Platforms: Windows, Unix, Linux, VMS (VAX), MS-DOS, Macintosh
Other Software: PageMaker, Interleaf, Microsoft Word, Excel, Power Point, Microsoft Project
Other: Secret Clearance (inactive), Project Direction, Geometric Dimensioning and Tolerancing, ISO 9000, FDA Regulations, Rapid Prototyping, Robotics

Professional Employment

December 2011 – Present

Senior Mechanical Designer
Oceaneering Advanced Technologies, Hanover, MD
Responsibilities: Design and development of the Counter Obstacle Breaching Asset (COBRA) man-portable mine clearing system for the Army's Path to Safety Disruptor (PTSD) program
Achievements: Developed toggle-trigger mechanism for catapult
Designed assemblies and parts for different concepts
Performed FEA to verify structural integrity
Procedures: Designed a notational torsion catapult based projector
Designed and developed spigot mortar based projector
Reviewed similar programs using either personal weapon (M4), 40mm grenade based projectors, line throwing systems, and related commercial equivalents
Investigated kinetic recovery rope to reduce jerk on the system when deployed
Performed a trade study on mechanical versus electric priming of propulsion charge,

January 2011 – September 2011

Mechanical Engineer
General Dynamics Robotics Systems, Westminster, MD (Contract Temporary)
Responsibilities: Design and development of mechanical systems for the Autonomous Navigation System (ANS) for robotic ground vehicles
Achievements: Engineering lead for windshield wiper system for ANS Laser Imaging Perception Module (LIPM)
Developed wiper drive and linkage to follow faceted optics
Directed prototype testing
Packaged shielded and hermetic control electronics for wiper system
Procedures: Selected vendor concepts for dynamic environmental and EMI/RFI shielding
Designed systems for compatibility with CBRN decontamination
Selected vendor to provide fluidics based window washer/sprayer
Developed enclosure for wiper controller and power supply
Tolerance and force analysis on for thermal pads in preparation of material change to avoid optical contamination

June 2010 – December 2010

Mechanical Engineer

Niitek Corporation, Dulles, VA (Contract Temporary)

Responsibilities: Design and development of mine and IED detection for immediate use in a combat environment on manned military vehicles and robots

Achievements: Redesigned cable carrier system to improve manufacturability and maintainability
Designed proximity sensor for Husky and Robotic Mine Detection System
Designed light weight battery installation for mine detection system on Talon[®] robot

Procedures: Interface with vendors to support rapid prototyping and evaluation of concepts
Modeling physical target and cleared path marking systems
Investigated use of casting to replace fabricated structural members

March 2010

Developer/Writer

Technology Transfer Services, Elkridge, MD (Contract Temporary)

Responsibilities: Coordinating parts lists and illustrations for post office sorting system using the Abortext[®] XML Editor and the Astoria content management system

October 2008 – July 2009, January 2007 – November 2007

Mechanical Engineer

Becton Dickinson Diagnostic Systems, Sparks, MD (Contract Temporary)

Responsibilities: Design, analysis, and vendor liaison for an automated PCR based DNA assay system, bench top TB test device, and bench top robotic real time DNA assay system

Achievements: Designed seismic stand for TB test system

Procedures: Used rapid prototyping technology to validate and test design concepts
Designed and performed laboratory study for improved sample tube material

November 2007 – August 2008

Mechanical Engineer

Energy Solutions, Laurel, MD (Contract Temporary)

Responsibilities: Design and analysis for nuclear decommissioning projects

Achievements: Confirmed dimensional requirements for video and ultrasonic sensors
Developed cable guides to reliably interface with drums on a production line

Procedures: Determined pressure drop and worst case operation conditions for metal filters

Other Employment

2003–2006 Mechanical Engineer, BAE Systems Ground Systems Division, York, PA

2002–2003 Mechanical Engineer, General Dynamics Amphibious Systems, Woodbridge, VA

2002 Mechanical Engineer, EG&G Ocean Systems, Ijamsville, MD

2002 Mechanical Engineer, Saft America, Cockeysville, MD

Professional Organizations

American Society of Mechanical Engineers (ASME)

Education

BSME, University of Massachusetts, 1987

Liberal Arts Curriculum, Hampshire College, Amherst, Massachusetts, 1980–1982

Honors: Engineering Teaching Assistant, U. Mass, CAD/CAM Course 1986–1987

Additional Experience

Conference Chairman, ARISIA Speculative Media Conference 1990, 1991; Organized conference, Incorporated Organization; Assembled staff; Drafted and implemented budget

Senator, Student Government Association, University of Massachusetts, 1985 – 1987

Student Senate Rents and Fees Committee member, audited University Trust Funds 1985 – 1987

Conference Director, NOTJUSTANOTHER Con I & II, Amherst, Massachusetts, 1985, 1986

Society for Creative Anachronism - Received regional award for design and construction of Roman Armor (Lorica Segmentata)