

# Eman Bayani CSWP CSWPA-DT CSWP-SM

Sr. Mechanical/Design Engineer



## CONTACT

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## PROFILE

To obtain a permanent or contract position as a senior mechanical or senior design engineer with special interest in design, development, and analysis using SolidWorks®.

## EDUCATION

University of California, Irvine - Bachelor of Science in Mechanical Engineering, Graduated June 1997.

## COMPUTER SKILLS

Packages: Windows®, Microsoft Office® products

SolidWorks®: 97plus/98/98plus/

99/2000/2001/2001plus/2003/2004/2005/2006/2008/2009/2010/2011/2013/2015/2018/2019/2021/2024

COSMOSWorks®: 97/97plus/98/99/2001/2005/2006

SolidWorks Simulation®: 2008/2009

SolidWorks® Animator: 2005

SolidWorks Flow Simulation®: 2008/2009/2010

## COMPUTER EXPOSURE

AutoCAD® 14, DraftSoft®, PDM Works®, CF Design® 8.0 & 9.0, SMARTEAM® 2005/2006, SolidWorks Simulation® 2010, SolidWorks Flow Simulation® 2011, SolidWorks Routing® 2013, SolidWorks Enterprise PDM® 2013, Siemens® Teamcenter PLM, Agile®, FloWorks®, Autodesk® Inventor®, and ANSYS®.

## PATENTS

Inventor of plastic detent bumpers (U.S. Patent #6,460,954, 6,145,944, CN 00800316 (China patent)) for ball bearing drawer slides. Hold patents in United States, Europe, Taiwan, and Mexico through former employer Accuride International. Inventor of a digital image capturing device system and method (U.S. Patent #9,930,248). This invention gives users the interface to adjust recognized object in an image capturing device.

## TRADEMARKS

Buytwits (Reg. No. 4,877,923). A trademark for users and merchants to exchange goods through social media.

ParaShuttle (Reg. No. 87,324,787). A trademark for handicapped transportation.

Pixo (Reg. No. 5,525,965). A trademark for a Crypto-Currency.

## WORK EXPERIENCE

**SKYRYSE** (El Segundo, CA) September 2025 – January 2026

*SolidWorks® Mechanical Engineer (Contract)*

Reverse Engineering of STP files to SolidWorks® files.

Detail Drawings of sheet metal modification parts for R66 Robinson Helicopter.

Installation Drawings of sheet metal modification parts for R66 Robinson Helicopter.

**EATON** (Orchard Park, NY) March 2023 – September 2023

*SolidWorks® Senior Mechanical Design Engineer (Contract)*

Modification of manifold for burst test using SolidWorks®2018.

Vibration and pitch valve development test procedure.

Fungus analysis of valve accumulator assembly.

Fungus analysis of compressor assembly.

Fluid contamination of valve accumulator assembly.

Modifications of proof plugs for valve accumulator assembly using SolidWorks®2018.

Poppet valve development redesign using SolidWorks®2018.

**TRU SIMULATION + TRAINING, Inc. (TEXTRON AVIATION/BEECHCRAFT/CESSNA)** (Lutz, FL) August 2022 – October 2022

*SolidWorks® Mechanical Engineer (Contract)*

Design of cockpit ducting and breathable air installation assemblies for Beechcraft Denali training simulator.

Design of sheet metal brackets for cockpit pedestal liners.

Design of 3D printed parts.

Preparation of detail parts, sub assemblies, and assembly drawings.

Solidworks PDM file management.

**PJ TRAILERS** (Honey Grove, TX) December 2021 – April 2022

*SolidWorks® CAD Designer (Contract)*

Verification of parts and sub-assemblies.

Reverse engineering of parts.

Assembly design of various trailers.

Preparation of detail and assembly drawings.

Solidworks PDM file management.

**LOMA SYSTEMS** (Carol Stream, IL) September 2021 – December 2021

*Design Engineer (Temporary)*

Finalize design of food inspection Conveyorized Metal Detectors using CADKEY.

Preparation of detail drawings for other design engineers.

Learned basic CADKEY.

**SUBURBAN WELDING AND STEEL** (Franklin Park, IL) May 2021 – June 2021

*SolidWorks® CAD Designer (1099)*

Design of sheet metal parts and plates for various projects.

Reverse engineering of parts for manufacturing.

Working with BySoft for manufacturing.

Preparation of simple detail drawings for design check.

Learned basic BySoft.

**ABBOTT LABORATORIES** (Irving, TX) December 2013 – May 2014

*SolidWorks® Design Engineer (Contract)*

Preparation of detail part drawings of a blood Analyzer.

Design and detail of cables using SolidWorks Routing®.

Design of sheet metal components.

Enterprise PDM and Team Center PLM File management.

**WOODWARD MPC** (Skokie, IL) May 2013 – October 2013

*Senior Engineer (Contract)*

Motor research for improved costing for production.

Preparation of geometric dimensioning and tolerancing (GD&T) part drawings for Bombardier rudder pedal system using AutoCAD.

FEA analysis using ANSYS for G loading.

Learned basic Inventor.

**SIERRA NEVADA CORPORATION** (Hagerstown, MD) September 2012 – January 2013

*SolidWorks® Design Engineer (Contract)*

Design of aft section of a Hawker Beechcraft Army plane for antenna installation.

Preparation of installation, detail, and assembly drawings for different components and assemblies on Beechcraft plane.

**L3 SPD ELECTRICAL SYSTEMS** (Philadelphia, PA) October 2011 – December 2011

*SolidWorks®/Flow Simulation® Senior Mechanical Engineer (Short term Contract)*

Upgrade of design of an existing electronic enclosure for Navy power/protection system.

Flow analysis (CFD) of enclosure and internal printed circuit boards.

Design and detail of parts and sub-assemblies for manufacturing.

**SOTERA DEFENSE SOLUTIONS** (Frederick, MD) April 2011 – June 2011

*SolidWorks® CAD Technician (Short term Contract)*

Creation of exploded views for military documentation.

Parts and assembly design for large circuit breaker electronic enclosure.

**VIASAT INC.** (Germantown, MD) March 2009 – October 2009

*SolidWorks®/Simulation®/Flow Simulation® Senior Mechanical Engineer (Long-term Contract)*

Design and development of a Convection/Conduction electronics enclosure.

Extensive CFD analysis on fin design (convection) and internal enclosure (conduction).

FEA analysis of multi-part electronic enclosure supports.

PDM works file management.

Documentation for castings and machining.

**DRS TECHNOLOGIES** (Herndon, VA) November 2008 – January 2009

*SolidWorks® Mechanical Engineer (Short term Contract)*

Analysis design of ISO-container packaging of U.S. Military JLENS project cables.

Design of reel systems for cable management and transportation.

Volume analysis of numerous different configurations of ISO-containers.

**BP SOLAR** (Frederick, MD) June 2008 – October 2008

*SolidWorks®/COSMOSWorks Design Engineer (Short term Contract)*

FEA design and development of multi-part solar panel tracking system.

COSMOSWorks® analysis for multiple scenarios of wind loads, gravity, and system loads.

Spreadsheet and hand calculations for verification of FEA data.

Concept creation from hand sketches to full working FEA assemblies.

**ROCKWELL COLLINS** (Sterling, VA) June 2007 – June 2008

*SolidWorks® Senior Design Engineer (Long-term Contract)*

Design and detail of different sections of two different U.S. Military helicopter training simulators (MH-60R and MH-60S).

Complex shaped sheet metal design and modification of MH-60S extended wing system and fairings.

Design and detail of MH-60S tow point assembly.

SmarTeam® file management.

Design using MIL-standard specifications and components.

**SWIFT ENGINEERING** (San Clemente, CA) February 2007 – June 2007

*SolidWorks® Mechanical Design Engineer (Short term Consulting/Contract)*

Assist in the design of aircraft jet engine mount components and assembly.

Complex exotic surface modifications of components.

2D-drawings of designed aircraft parts and assemblies.

Creation of Complex installation exploded drawings.

PDMWorks® file management.

Site address: <http://www.eclipseconceptjet.com/>

**AP LABS** (San Diego, CA) March 2006 – January 2007

*SolidWorks® Mechanical/Design Engineer (Permanent)*

New product redesign and development of aerospace enclosure (electronic packaging) rack system.

CFD analysis (CF Design® 8.0 & 9.0) of different enclosures (electronic packaging).

ECO, document maintenance, 2D drawings creation, and SmarTeam®.

Vibration modal and FEA (COSMOSWorks® 05/06) analysis per MIL-spec standards of multi-part assemblies.

**SENIOR JET PRODUCTS** (San Diego, CA) February 2006 – March 2006

*CATIA®/SolidWorks® Mechanical Design Application Engineer (Short term Contract)*

Tooling design for ring welding machines.

Assist with import and export of CATIA® files.

Manufacturing and tooling support using CATIA®.

Staff engineering support using SolidWorks® and CATIA®.

**SEASPACE CORPORATION** (San Diego, CA) May 2004 – January 2006

*SolidWorks® Mechanical/Design Product Engineer (Permanent)*

Design and development of antenna pedestal systems.

FEA of parts and multi-part assemblies.

Hand calculations for a variety of projects.

Creations of animations for proposals and demonstrations.

Maintaining large assemblies.

**SCHOLLE PACKAGING** (Irvine, CA) March 2004 – May 2004

*SolidWorks®/AutoCAD Mechanical Design Engineer (Short term Contract)*

Design and development of industrial wine filler machines.

Performing ECO's and ECR's using AutoCAD®14 and SolidWorks®.

Reverse engineering of wine filler subsystems.

Creating parts and assemblies using manufactured and OEM parts.

Production of bill of material for subsystems.

**SAF-T-FLO** (Placentia, CA) August 2003 – January 2004

*SolidWorks® Mechanical Design Engineer (Consulting)*

Working on chemical injection units used for main city water pipes.

Concept modeling of parts and assemblies using SolidWorks®.

Reverse engineering of existing valve and injection products.

Performing engineering pipe pressure calculations.

Fabrication of engineering drawings for custom injection units.

**SES BRANDS** (Commerce, CA) January 2003 - August 2003

*SolidWorks® Mechanical Design Engineer (Permanent)*

Design and development of industrial refrigeration (HVAC) rack systems used by major food chain companies like BJ's Pizza®.

Reverses engineering.  
AutoCAD® and SolidWorks drawings of manufactured parts.  
Multi-part assembly design and quick multi-body FEA analysis.  
Interactions with manufacturing personnel.

**HARTWELL CORPORATION** (Placentia, CA) December 2002 - January 2003

*SolidWorks® Mechanical Design Engineer (Short term Contract)*

Reverse engineering, part and assembly modeling of airplane door latches.  
Production of assembly and part drawings.  
Production of SolidWorks® part files from IGES Files.

**RAINBIRD CORPORATION** (Azusa, CA) April 2002 - November 2002

*SolidWorks® Mechanical Design Engineer (Long-term Contract)*

Redesign and development of plastic sprinkler nozzle (SolidWorks®2001/2001plus).  
Vendor interactions, part and assembly prototyping.  
Assist project team members with milestones and goals.  
CFD and FEA testing of prototype parts.

**ORMOND INC** (Santa Fe Springs, CA) November 2001 - July 2002

*SolidWorks® Mechanical Design Engineer (Long-term Contract)*

Design and development of weight calibration systems used for aerospace and commercial aircrafts.  
Creating and maintaining large assemblies.  
Preparation of engineering drawings for production and development.  
FEA of high stress parts and assemblies.

**PHOGENICS IMAGING** (Rancho Bernardo, CA) May 2001 - June 2001

*SolidWorks® Mechanical Design Engineer (Short term Contract)*

Design engineering (SolidWorks®2001) of a subsystem called the “conveyor” for a new high quality photo printer.  
Assist manufacturing team in design of rotating plastic components used for the conveyor system.  
Assist in Industrial design of multiple variations of exterior covers adjoining the conveyor.

**STAR TRAC BY UNISEN** (Irvine, CA) July 2000 - January 2001

*SolidWorks® Mechanical Design Engineer (Long-term Contract)*

Design and Development of a new line of exercise equipment called the “Thruster”.  
New product management from concept to production.  
Creation of multiple parts and large assemblies (SolidWorks®2000).  
Design and stress analysis of welded frames.  
Creating Detailing drawings for manufacturing and Prototyping.  
Performing ECO's and ECR's.  
Design of a Treadmill impact testing machine using a rotating cam assembly.

**MEDSTONE INTERNATIONAL INC.** (Aliso Viejo, CA) August 1999 - January 2000

*SolidWorks® Design Engineer (Long-term Contract)*

Assembly and component design (SolidWorks®99) of an X-ray imaging machine called the “U-Arm”.  
Maintaining and modifying an STS-T Lithotripter bed assembly.  
Reverse 3D engineering.  
Prototyping of designed components by machining and forming.  
Preparation of detailing and exploded drawings for design reviews and manufacturing.  
Design and development of a water filtration system piping.  
Solenoid and valve research and design.  
Design and prototyping of sound reduction components.

**ACCURIDE INTERNATIONAL INC** (Santa Fe Springs, CA) December 1997 - April 1999

*SolidWorks®/AutoCAD Research & Development Design Engineer (Permanent)*

Product design and development of new concepts using SolidWorks®97/97 plus& 98.

Finite element stress analysis of concepts and prototypes using COSMOSWorks.

Project leader for a new ergonomics product line

Plastic parts design for molding.

Material research and analysis.

Vendor interactions and survey.

Production of CAD detailing and exploded drawings for tooling and manufacturing.

Interface with marketing and manufacturing.

Interaction with CNC programmers and machine shop.

## **OTHER**

Certified SolidWorks® Professional Sheet Metal (Certificate ID: C-HTZ58ACENY), January 23, 2024.

Certified SolidWorks® Professional-Advanced Drawing Tools (Certificate ID: C-YPQXPD8NKF), September 1, 2015.

Certified SolidWorks® Professional (Certificate ID: C-H8B2XFMZ59), August 27, 2015.

Certified SolidWorks® Associate (Certificate ID: C-EXL9PLS62C), May 4, 2015.

Certified SolidWorks® Training, March 12, 1998.

Certified CF Design® 8.0 training.

ISO 9001 Quality Systems Internal Audits Training, October 1998.

Engineering degree from accredited university.

Strong 3D modeling (approximately 23,000+ hours of SolidWorks®).

Experience in finite element analysis and computational fluid dynamics.

Willing to travel.

Willing to work on contracts.

U.S. Citizen.

Eligible for security clearance.

## **REFERENCES**

Available upon request.