TUWAN M ROBERTS

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WOODSTOCK, MARYLAND 21163

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**PROPOSED POSITION:**

To obtain a position that will enable me to gain experience and become an effective asset, while utilizing my knowledge in Mechanical Engineering, Reverse & Design Engineering, 3D Printing, 3D Scanning, (3D) Computer Aided Design (CAD) modeling and CAD Animation.

**CLEARANCE: TOP SECRET CLEARANCE** (**TS/SCI LIFESTYLE**)

**EDUCATION:**

**Baccalaureate of Science in Mechanical Engineering**

**Major:** *Mechanical Engineering*

University of Maryland Baltimore County, **2006**

**Associates Degree in Engineering Science**

**Associates Degree in Computer Aided Design**

**Majors:** *Engineering Science* | *Computer Aided Design*

Catonsville Community College, **1998**

**EXPERIENCE SUMMARY:**

**CAD MODELER**

*JULY* 2005 – *JANUARY* 2017

**DELEX Systems, Incorporated**

13865 Sunrise Valley Drive, Suite 250, Herndon, VA 20171

**Office of Naval Intelligence (ONI)**

4251 Suitland Road, Washington, DC 20395

Supporting ONI (Office of Naval Intelligence) by providing Reverse Engineering services using **6** tools**:** **3D CAD Modeling** services using Siemens PLM NX v6 software application (previously called UNIGRAPHICS), **3-Dimensional Printing** (using MakerBot and LulzBotTaz 6) to build microelectronic packaging and tools, **Metrology** (using the following tools like the FARO Arm, the ROMER Arm and the SURPHASER short and long range scanners) and **Polyworks** software that produces polygonal data from captured 3-Dimensional point cloud surface data (captured using 3D Scanners). These tools are used to create 3-Dimensional models of any size and shape**;** of any uniform and non-uniform shapes. **Casting and Molding** services using Smooth-On product. Provided **Animation** services (using MAYA software) for modeled components to create video on how components move and work together; for the FME (Foreign Materiel Exploitation) program at ONI**.**

**SENIOR CAD SPECIALIST**

*DECEMBER* 2004-*JULY*2005

**Lockheed Martin Corporation**

9160 Guilford Road – Columbia, MD 21046

Supporting using the AutoCAD software to make design layouts and design changes on the home land security project, **HOVAWART**. Work with Professional Engineer (PE) to complete all design changes. Worked on the database planning team; the database software is called Access.

**CAFM SYSTEM OPERATOR**

*JUNE*2004 -*OCTOBER*2004

**Facilities Solutions Group, LLC**

607 Herndon Parkway – Herndon, VA 20170-5477

Supporting and using the Computer-Aided Facilities Management (CAFM) System to update people, space, telecom-data and NGA’s (National Geospatial Agency) global address list data using the software program called Archi-bus. Created links to peoples information using poly line drawing techniques. The computer ran Batch Occupancy Routines (BORs) and Auto Catalog Routines (ACRs) within AutoCAD to link people, space and NGA’s assets to the Asset Management Software called Archi-bus. The AutoCAD poly line drawings information then appears in real time on the NGA intranet for employee information access.

**JUNIOR MECHANICAL ENGINEER**

*FEBRUARY*2002 -*JUNE*2004

**Johnson Controls World Services**, **Incorporated**

9221 Rumsey Road Suite 4 – Columbia, Maryland 21045

Supporting and providing mechanical engineering AutoCAD drawings for the Micro Electronics Laboratory. Provide documentation support to upgrade microelectronic lab HVAC and tool modifications in the **mechanical room** and in the **clean room**. Helped design and documented future mechanical projects for the Project Manager’s developmental duties. Translate concept from verbal, sketch and media into technically correct designs with proper mechanical drawing formats. Maintained and corrected deficiencies in existing drawing documentation. Calculate fluid flow in the DI-water tank to determine a more effective way to save on the cost of Nitrogen Gas (N2) loss. Also made design change layouts and calculations on the carbon dioxide fire suppression piping system for the Mark Systems Incorporated system.

**CAD SOFTWARE CERTIFICATIONS:**

CAD Software Siemens PLM NX v8 & v10/ CADAM / Micro Station / Auto-LISP

CAD Software Siemens PLM NX Synchronous Modeling and Parametric Design /

POLYWORKS v12 /MAYA (Animation) v10 / AUTOCAD / AUTODESK Inventor / CATIA /

3DstudioMax

**METROLOGY CERTIFICATIONS:**

SURPHASER Scanner / FARO Arm Scanner / ROMER Arm Scanner / Coordinate Metrology Systems Conference (**CMSC**)

**ENGINEERING SOFTWARE:**

Mat LAB / Math CAD / Finite Element Modeling / FORTRAN / Visual Basic /

Dream-Weaver /Web-Page Design