

***Patrick W. Truitt Jr.***

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## **EMPLOYMENT HISTORY**

### **Truitt LLC**

November 2018-present

#### **Owner Chief Engineer**

Engineering consulting company mainly focused in medical device design. Also have clients in racing field such as NASCAR and Formula 1 for Computational Fluid Dynamics consulting on aerodynamic design.

### **TTI Floor Care North America**

February 2015-November 2018

#### **Engineering Manager of R&D and IoT**

Led and worked with a team of cross functional engineers to develop multiple POC vacuum robots for mass retail distribution. Work heavily with teams in Taipei Taiwan, Shenzhen and Suzhou China. Developed state of the art vacuum sensor with IoT capabilities. Developed entire TTI cloud infrastructure on AWS to run cloud controlled robots as well as managed all APP development for iOS and Android. Managed development of 7 Lithium battery products to form a network off products that operate from one battery platform. Lead team of engineers in the Advanced Development group (R&D) for multiple projects key to strategic growth of the company.

#### **Sr. R&D Scientist, Engineer**

March 2014-February 2015

Was tasked with building a working proof of concept robot vacuum cleaner in less than 100 days and to exhibit the working model to the Global CEO/President of TTI. Completed project in less than 100 days and project was moved into production. Added key IP inventions to company portfolio and are currently being filed by TTI.

**Fisher & Paykel Ex. 2002**  
ResMed v. Fisher & Paykel

## **Sigenix**

2013-present

Lead Consultant Mechanical Engineering and Medical Device Design

Work on various medical projects for venture capital start up and various Doctors in the Pittsburgh PA area. Work is mostly mechanical engineering doing 3D CAD designs and do it completely on the side during non-business hours.

## **Bayer Health Care**

February 2013-December 2013

### **Principal Mechanical Engineer**

Lead engineer on particulate filter design (25 micron) for single patient medical disposable, in addition mechanical engineering representative for converting packaging from sterile barrier to sterile fluid path for syringe disposables.

## ***Vocollect (Honeywell)***

April 2009 to December 2012

### **Lead Mechanical Engineer, MTS IV**

Technical Lead on the T1 Vocollect voice enabled wearable computer for warehouse logistics. Vocollect wearable computers are designed to operate in harsh environments from -30C to +50 C; units must also be IP67 and withstand multiple drops from 6ft to concrete.

Considered by peers as the lead technical advisor on all injection mold part designs and FEA analysis for NPD and sustaining projects.

Responsibilities include all management of mechanical aspects of new product development projects including detailed design, analysis, prototyping and documentation.

***Starr Life Sciences Corp.***

October 2006 to February 2009

**Electro-Mechanical Project Engineer (New Product Development)**

Lead the full design verification of a Pulse Oximeter for Animals trade named MouseOx™ Rev 3,4 and 5 product line.

Lead a new product development project to commercialize an implantable sensor for the MouseOx™ which included interfacing with researchers at the University of Wisconsin, National Institute of Health and Case Western Reserve University. Responsibilities encompassed all aspects of product development from concept feasibility through product release including documentation, design testing and validation.

***Renal Solutions Inc (Fresenius Medical)***

May 2005 to October 2006

**Lead Mechanical Engineer (NPD)**

Lead mechanical engineer on project to design and build a kidney dialysis machine for home use. The kidney dialysis machine consisted of Sorbent technology and Patented disposable blood pump and many peristaltic stepper motor driven pumps.

Design included pneumatics, sheet metal, machining, castings and injection molded parts. As lead ME, responsible for over 300 parts and assembly drawings on project and over 1,000 parts required to assemble the machine.

Design team used Pro Engineer Wildfire 3.0 with Intralink software.

FEA simulations performed using ANSYS.

***Respironics Inc. (Philips)***

February 1996 to May 2005

**Senior Mechanical Engineer (NPD)**

Lead mechanical engineer on several new product development projects. Projects consisted of high volume medical devices for consumer and hospital use. Specifically designed: High speed fan blades for CPAP and Ventilators, fluid sensors, air flow valves, patient interface devices and the plastics associated housings.

Responsible for all aspects of mechanical design for new product development including overseeing designers, technicians and document control personal.

Performed detailed part analysis using such tools as FEA in disciplines of stress, modal and CFD, also geometric dimensioning and tolerance stack up.

Headed the acoustical research for product development:

Implemented 16.8 dBA background anechoic chamber with state of the art test equipment for development of new quiet product lines to meet customer needs.

***L.V.R. Inc.***

January 1994 to February 1996

**Refractory Sales Engineer**

Estimated and designed refractory installation projects for the Power, Cement, and Steel making industries. Oversaw on sight installations and maintained a customer portfolio covering three states.

***United States Navy***

August 1988 to August 1992 **Nuclear Operator Mechanical Plant**

Selected as staff instructor, responsible for operating a 100 Mega Watt nuclear reactor for purposes of training students to operate fleet nuclear reactors.

**EDUCATION**

2015 **DoD Cyber hacking-Security school** Sec+ certified

2000 **Bridgewater University**

BSME Mechanical Engineering, minor in Electrical Engineering

1993-1994 **Allegheny Community College, Pittsburgh Pennsylvania**

A.S. Environmental Science Technologies

1988-1992 **United States Navy: Naval Nuclear Power School, Orlando, Florida**

**Naval Nuclear Prototype School Ballston Spa, New York.**

Graduated top 3 in class of 2000, naval and DOE certification in Nuclear Engineering, mechanical plant.

Mechanical Operators License for Nuclear Power Plant issued by D.O.E.

Computer Proficient in all window applications, **MathCad, MatLab, SAP, ORACLE, Pro-Engineer Creo 2**

**PDM Link, ANSYS 15.0, Fluent CFD, B&K Pulse System and LabView**

**U.S Patents** 26 US Patents issued or applications filed:

US6269811B1  
US6581596B1  
US6622724B1  
US6644311B1  
US6968842B1  
US7134434B2  
US20070044799A1  
US20060283450A1  
US20090149727A1  
US6915705B1  
US7448382B1  
US7975688B1  
US20080168948A1  
US20070132117A1  
US20070157928A1  
US6431170B1  
US20120028080A1  
US20100145170A1  
US20120038515A1  
US20160121054A1  
US20170273526A1  
US20170000305A1  
CA2611603A1

**Societies American Society of Mechanical Engineers (ASME) member since 1998.**

**Society of Plastics Engineers (SPE) member since 2000**