

Colin Jalbert

Natick, MA USA 01760

Mobile: (774)-307-3417

Email: Colin.jalbert1@gmail.com

Portfolio: <http://colinjalbertportfolio.com/>

INDUSTRY EXPERIENCE

Sartorius

Hopkinton, MA

Mechanical Engineer

August 2021 - June 2023

- At Sartorius, I developed my engineering and documentation (URS, DFS, BOM, DFMEA) capabilities by leading mechanical development for chromatography machines while meeting complex regulatory challenges.
- I was the lead mechanical engineer on multiple projects and was responsible for the 3d modeling, force simulation and optimization alongside coordinating the project with the other team leads.
- I individually brought in-house prototyping to the Sartorius Hopkinton location and led the purchasing, machine assembly and new-member training for the facility.
- Integrated UV, conductivity, pH, flow & pressure sensors in a variety of virtual and prototyping environments to best optimize the process flowpath.

Made Robotics LLC

San Jose, CA

Design Engineer

May 2019 - August 2021

- Using AutoDesk Inventor and in-house manufacturing, I created and tested robotic products, optimizing for a variety of cost/performance metrics.
- Designed and prototyped initial proof of concepts, generated technical documentation and prepared 3D CAD models for scalable manufacturing.
- Responsibilities included electro-mechanical assembly design, component determination, geometric dimensioning and tolerancing, and FEA simulation.
- Concept to prototype realization was accomplished using a variety of sensors, including but not limited to lidar, ultrasonic, pressure, gyroscopes and accelerometers.

United States Army

USA. Kuwait. Iraq

Engineer

Fall 2012 – Fall 2018

- Worked with a multidisciplinary team of engineers to accomplish mechanical, hydraulic, and electrical engineering missions for the US Army Corps of Engineers.
- Developed familiarity with a wide range of hands-on skills, including using industrial machines (CNC, lathe, mills, saws, drills, hand-tools) as well as electrical engineering skills such as wire braiding, crimping, soldering, connector attachment and troubleshooting.
- Overseas deployment led to a leadership position where I was coordinating the efforts of numerous engineers.

YourStory International

Design Engineer

Pont Morel, Haiti

December 2013 – 2016 (summers)

- Co-founded a non-profit organization to develop a holistic approach to reducing trash in Haiti by designing a machine system which converted throwaway polymers into lightweight building materials.
- Extensively used 3D CAD programs (Solidworks + Fusion 360) to design electro-mechanical machinery that was manufacturable on a large scale.

EDUCATION

University of Massachusetts, Amherst

Bachelors; Mechanical Engineering

Amherst, Massachusetts

Graduation Date: May, 2019

PERSONAL PROJECT EXPERIENCE

Robot Quadruped

- Designed and built quadruped and hexapod robots to aid in home maintenance and improve quality of life for physically or mentally impaired individuals.
- Designed and assembled PCB, fabricated material, designed actuated-assembly systems, and prototyped various 3D printing techniques to test reliability and surface conditions.

Wireless Robotics Controller

- Designed, fabricated and programmed a wireless robot controller equipped with numerous sensors and control modules including but not limited to encoders, 9-Axis IMUs, potentiometers, switches, buttons, capacitors and resistors.

KNOWLEDGE, SKILLS & ACKNOWLEDGEMENTS

Languages: Fluent in English and French, knowledge of Spanish.

Patents: Single Passenger Vehicle For Adaptive Transportation.

Technical Skills: 10+ years 3D Modeling; AutoDesk Inventor, SolidWorks, AutoDesk Fusion 360, SpaceClaim, MATLAB, FEA, SAP & ECTR.

Programming Languages: C++, Arduino, HTML, CSS, Javascript, React, G-code.

R&D Industrial Skills: CNC Machines, Lathes, Mills, Saws, Drills, Hand Tools, Measuring Tools, 3D Printers, Sand Blasters, Planar, Jointer, Laser Etcher, Plasma Cutter.

R&D Electrical Skills: Multimeters, Oscilloscopes, Wire Stripping, Braiding, Soldering, Connectors, PCB Design, Electrical Diagram Creation and Documentation.

Sensors: pH Sensors, Temperature, Conductivity, UV, Spectrophotometers, Pressure, Ultrasonic, Gyroscopes, Current, Lidar, Force, IR, Humidity, Photoresistors.

Motors: Stepper, Servo, Brushed DC, Brushless DC, Linear Actuators.