

# WILLIAM MAXWELL SUTTER

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## EXPERIENCE

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**Proteowise, Inc., Senior Mechanical Engineer, New Haven, CT** 2024 - Present

- Refined mechanical design of microfluidic cartridge comprised of 9 materials, 6 moving parts, and 4 overmolds.
- Managed external team (including mechanical, electrical, software, and quality engineers) through the design, fabrication, assembly, and quality testing of three beta instruments.
- Implemented standard operating procedures, quality control processes, and traceability documentation for all internally-produced subassemblies.
- Developed models for a fluidic manifold containing 40 valves, 9 reagent inlets, and 8 reagent outlets, allowing optimization of reagent usage and instrument runtime.

**Bexorg, Inc., Mechanical Engineer & Director of Technology, New Haven, CT** 2022 - 2023

- Developed sensor, control, and fluid handling systems for an innovative perfusion device with the ability to restore cellular metabolic function in dead organs.
- Designed custom engineering solutions for diverse branches of a highly interdisciplinary team, including surgeons, neuroscientists, molecular biologists, data scientists, and engineers.
- Liaised with manufacturers to specify and customize materials, products, and methods for sensitive, novel applications.
- Advanced laboratory management systems by specifying bills of materials and implementing software and hardware version control, as well as archiving and tracking of over 100 pieces of custom laboratory equipment.

**Escape Industries, LLC, Founder & Lead Engineer, New Haven, CT** 2014 - Present

- Grew company to 25 employees and 3 locations, with over \$1M annual revenue for 3 consecutive years.
- Developed and executed marketing strategies including SEO, SEM, social media, email, viral, and guerilla campaigns.
- Managed diverse production teams of up to 11 including electrical engineers, carpenters, and visual artists in the remodeling of 2,500SF office space into an interactive entertainment venue.
- Designed, manufactured, and installed interactive puzzles, set pieces, and sound and lighting effects for 12 original real-life escape room games serving 30,000 customers per year.
- Conceptualized, programmed, prototyped, and fabricated interactive electronic puzzles and effects.
- Drafted 3D models of real-life escape room spaces, set pieces, and props as guiding documents for production teams.
- Capitalized on opportunities created by the COVID-19 pandemic to bring 6 new coronavirus-safe products to market and generate revenue and brand visibility despite adverse conditions for small businesses and live entertainment.

**Ancera, LLC, Engineer, Branford, CT** 2012 - 2015

- Invented microfluidic cartridge for biological assays using ferrofluid-assisted detection (US Patent #20180029033).
- Oversaw transition from prototyping to mass manufacturing of over 1,000 units of custom microfluidic cartridges.
- Formulated quality control metrics and methods for incoming mass-manufactured parts.
- Presented test results, analysis, and design decisions at weekly all-hands meetings.
- Designed, prototyped, tested, and integrated user-facing mechanical components of rapid medical diagnostic device.
- Developed in-house archive organization system for all experimentation, fabrication, and quality control procedures.

## EDUCATION

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**Yale University, New Haven, CT** 2011

**B.S. Mechanical Engineering (ABET Accredited), GPA: 3.74**

*Relevant Coursework:* Mechanical Design Seminar, Artificial Intelligence, Appropriate Technology for the Developing World, Human-Centered Design, Thermodynamics, Fluid mechanics, Mechatronics Laboratory, Machine Shop

*Activities:* Musical Director - Yale Undergraduate Gospel Choir

## SKILLS & HONORS

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- *Computer Skills:* Proficient in Arduino, JavaScript, html, CSS, SolidWorks, SketchUp, CorelDRAW, MS Office, Squarespace, WordPress; experience with C++, python, FORTRAN, MATLAB, Adobe Creative Suite, AutoCAD
- *Fabrication & Laboratory Skills:* Proficient with lasercutting, 3D-printing, electronics, wood- and metal-work, CNC machining, MIG and oxy-acetylene welding, oscilloscope, wet lab, microscopy
- *Honors:* Eagle Scout