

ABHI SHAH

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COMPETENCIES

Tools And Software: SolidWorks, Creo, Onshape, CATIA, PDM, Windchill, C++, HTML, JavaScript, Figma

Skills: Sheet Metal Fabrication, Machining, Die Casting, Aluminum Extrusions, Overmolding, 3D Printing, Surfacing, Top-Down Modeling, DFM, DFA, FEA, Tolerance Stack-Up Analysis, Injection Molding, FMEA, ECO, Environmental Validation Testing, Vendor Development

Standards: NEMA 4X, IPXX Compliance, NADCA Standards, IS Standards, CSA Standards, MIL-STD

PROFESSIONAL EXPERIENCE

Pipedream Labs (Robotics and Automation Startup)

Austin, Texas

Product Owner / Sr. Mechanical Engineer

Aug 2023 – Present

- Owned end-to-end development of a core subsystem for a multi-million dollar automation project installed at a \$500M restaurant chain in Dallas, TX. Planned and executed from architecture to deployment.
- Validated product performance during DVT with 0 major failures
- Created a high level production strategy to go from first to a 100 drive-thru installations
- Developed junior engineers by delegating tasks, reviewing designs, helping them navigate technical roadblocks, and ensuring adherence to project timelines and requirements
- Implemented comprehensive SOPs for CAD document management, introducing engineering best practices
- Identified, resolved and documented major inefficiencies in Onshape sheet metal design workflows and improved performance by 90% on comparable files for the entire team
- Created an internal tool to automate revision-controlled BOM creation and management, adding preventative controls prior to production

Pump Studios (Engineering Consulting)

Austin, Texas

Product Owner / Sr. Mechanical Engineer

Mar 2022 – Aug 2023

- Owned proof of concept to PVT for multi-million dollar project currently in [pre-sale](#)
- Led cross-functional collaboration while successfully negotiating trade-offs between features, timeline and budget
- Designed a product to pack, ship and unpack 800lbs of cable chain featuring a custom gearbox with direction switchable ratchet to perfectly balance speed with safety reducing operation time by 75% and labor cost by 66%
- Developed robust snap-fit solutions using FEA, improving assembly efficiency and part durability

Catalyst Design Consulting Inc. (Engineering Consulting)

Calgary, Alberta

Founder / Sr. Mechanical Design Engineer

May 2018 – Feb 2022

- Founded an engineering consulting startup, averaging 6 figures in gross profit per year
- Designed medical devices with the University of Miami. Co-inventor of U.S. Patent # [11957569](#) , [20200276010](#)
- Developed a hand held gas detector using two shot Injection molding with slider mechanism for 10,000 units/year production and tested to Intrinsic Safety (IS) and CSA standards
- Reduced consumer electronic product cost by 40% with product redesign and overseas vendor management

Nureva Inc. (Audio/Video Conferencing Startup)

Calgary, Alberta

Sr. Mechanical Engineer

Mar 2021 – Sep 2021

- Achieved 30% cost reduction on flagship product by optimizing part count, material selection and manufacturing
- Directed the migration of manufacturing operations from China to Malaysia, enhancing supply chain
- Implemented and managed PDM system that streamlined collaboration and improved workflow efficiency
- Planned and executed humidity testing for samples from Malaysia facility

Novatel Inc. (GPS and GNSS Systems)

Calgary, Alberta

Mechanical Engineer & Manufacturing Engineer

Apr 2015 – May 2018

- Conducted rigorous reliability testing on PCBAs and electromechanical packaging including HALT, drop, ingress, humidity, vibration, and bump tests—to validate product durability and ensure compliance per MIL-STD
- Reviewed PCBA designs for manufacturability and Developed PCB/PCBA manufacturing processes to get reliability of 99.96%

EDUCATION

Bachelor of Engineering (B.Eng.), Mechatronics

Oshawa, Ontario

Ontario Tech University

2010 – 2014