# William Sadowski

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## Education

Northwestern University; Evanston, IL

**Undergraduate Mechanical Engineering Major**, Classical Studies Minor; GPA: 3.624/4.0

Relevant Coursework: Mechanical Design & Manufacturing, Engineering Design – Senior Capstone, Intro to Mechatronics, Computer Integrated Manufacturing: Processes, Intro to Aerospace Engineering, Scientific/Embedded Programming in Python, Public Speaking

## Skills

Computer: Siemens NX, SolidWorks, Fusion 360, AutoCAD, Microsoft Office, Abaqus, Ansys, Java, Python, C/C++, MATLAB
Technical: GD&T, Six Sigma, CNC Machines, Mill, Water Jet, Lathe, Bandsaw, Drill Press, Soldering, Sheet Metal Fabrication
Additional: Project Management, Organization, Creativity, Communication, Active Listening, Time Management

## Experience

**SyBridge Technologies Project Engineer** July 2023 – July 2024

- Managed technical application requirements for over $3 million of parts for CNC machining and sheet metal applications as the end-to-end owner, leveraging strong analytical and problem-solving skills to meet project milestones and objectives
- Interfaced with customers, external manufacturing partners, sales, and supply chain to perform Design for Manufacturability (DFM) analysis and support the production process for both prototype and high-volume opportunities
- Compiled properties for 50 materials and 20 finishes into a useful, extensive database to be leveraged by marketing and sales
- Conducted comprehensive technical part reviews and supplier capability assessments, facilitating efficient downstream production execution for on-demand manufacturing
- Advised cross-functional teams and customers on manufacturing methodologies for 3-axis, 5-axis, and lathe CNC machining applications, optimizing design for manufacturability and ensuring alignment with project objectives
- Analyzed customer CAD, 2D drawings, part lists, and other technical specs to evaluate manufacturability and scope of work
- Coordinated with costing team to integrate key application details/deviations into accurate manufacturing cost estimations
- Led internal investigations and supported corrective actions in response to customer complaints and product returns, ensuring continuous improvement in product quality and customer satisfaction
- Collaborated with internal and customer quality teams to define comprehensive inspection plans (including PPAP, FAI, and others), ensuring adherence to quality standards throughout the production process
- Supported internal continuous improvement initiatives, driving cost reduction and operational efficiencies within SOPs
- Demonstrated strong understanding of part drawing specifications, including complex GD&T and critical feature recognition, ensuring accurate interpretation and implementation in manufacturing processes

**OSG USA Manufacturing Engineer II** October 2021 – July 2023

- Aided in the creation of $150 million of premium cutting tools for aerospace, automotive, energy, and other industries
- Implemented the use of both roughing and finishing wheels to cut plunge grinding cycle times of NP5 machines by 30%-50%
- Conducted process capability (CPK) studies to test the feasibility of outsourcing blank preparation of materials in order to increase new tool production and profit
- Worked with customers to develop custom tools that met all expectations by translating requirements into CAD drawings
- Generated tool simulations to facilitate print creation and definition of specifications from manufacturing standpoint
- Applied material science and clever problem solving to CNC programming, manufacturing drawings, and production routing
- Created production routing and BOMs to direct and control production process from acquiring material to finished product
- Worked with quoting team to review product requirements and create drawings to support quote requests
- Supported production team with manufacturing processes and inspection team by creating CNC inspection programs and used tool analyzer equipment to ensure all tools are within tolerance
- Assisted in the investigation and analysis of new materials, equipment, and engineering processes

**Northwestern University Undergraduate Research Assistant** June 2020 – June 2021

- Applied mechanistic data science (MATLAB, Python) to applications in additive manufacturing and medical imaging
- Developed a deep learning algorithm to predict the surface roughness and fatigue life of additively manufactured Ti-6Al-4V parts from input parameters of the manufacturing process

## Projects

Consolidated Foam Inc. – Buffalo Grove, Illinois

**Garden Seat/Kneeler Re-Design** September 2020 – March 2021

- Improved the design of the *Gardien* Garden Seat/Kneeler to make gardening safe, comfortable, and accessible for all users
- Analyzed consumer pain points and market alternatives, generated product concept solutions, built functional mockups and prototypes, and tested product concepts against pre-determined specifications and metrics
- Developed a functional alpha-level prototype which reduced wobble by 2º-3º that also featured a hand-actuated locking and folding mechanism, added tool storage, ergonomic handles, comfortable kneeling/sitting surface, and rigid frame for support