

Nicholas McLaughlin

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Engineering Design Portfolio: [BendMA.com](https://www.bendma.com)

EDUCATION

M.S., Mechanical Engineering, Graduated May 2021, **GPA: 4.00** *Concentrations: Vibrations, Dynamics, Controls & Engineering Entrepreneurship*
University of Massachusetts Lowell, Lowell, Massachusetts

B.S., Mechanical Engineering, Graduated May 2020, **GPA: 3.93**
University of Massachusetts Lowell, Lowell, Massachusetts *Minor: Business Administration for Engineers*

SKILLS

- SolidWorks, Fusion360, MATLAB, Python, MS Word, MS Excel
- COMSOL, Six Sigma, Design of Experiments, Numerical Analysis, Project Management
- Design for Manufacturing, Design of Experiments, CNC Manufacturing, Laser Cutting, Manual Mills and Lathes, Woodshop Tools, 3D Printing (Filament & UV Resin)
- Startup Development, Financial Analysis, Business Law, Patents, Leadership

EXPERIENCE

Founder & Design Engineer – Cardinal Music Co., Peabody, MA Oct. 2021 – Present

- Founded a corporation that manufactures an innovative and novel customizable modular guitar
- Designed interchangeable guitar system that enables consumers to order personalized guitars out of approximately 5 *billion* guitar combinations
- Responsible for the design, engineering, manufacturing, testing, administration, business development, web development, sales, and outreach
- Filed for a provisional patent in Dec. 2021 and filed for incorporation in Jan. 2022

Chief Technology Officer, Project Manager & Engineer – Ceromaze, Salisbury, MA May 2021 – Oct. 2021

- Responsible for the design, engineering, development, validation, manufacturing, and testing of a novel wearable respiratory sterilization device
- Manufactured and operated testing equipment, validated manufacturing processes, and designed embedded electrical systems in-house
- Conducted design reviews, kept documentation, and acted as an engineering liaison
- Led human factors engineering in designing form-fitting hardware to fit on the 5th - 95th population percentiles

Intern Engineer – SemiNex Corporation, Peabody, MA May 2018 – Aug. 2019

- Managed the design, engineering, manufacturing, and implementation of 8 ESD-safe component trays
- Machined, assembled, and repaired laser components, assemblies, and manufacturing devices
- Trained incoming technicians in quality testing procedures and manufacturing techniques

PROJECTS

CEO/Mechanical Engineer – Neoclinic, Lowell, MA Sept. 2020 – Nov. 2020

Led three team members through developing a business plan for a prospective medical device start-up

Mechanical Engineer – Bend, Peabody, MA July 2020 – Present

- Ideate, innovate, design, engineer, and develop unique mechanical products such as an [electric motorcycle](#), [armoire hidden door](#), [double-helix desk](#), [electric guitar](#), and [innovative multi-tool](#)

Team Leader/Mechanical Engineer – Automotive Drivetrain Capstone, Lowell, MA Jan. 2020 – May 2020

- Led a team of four mechanical engineering seniors in the design and integration of an auxiliary system to control the coefficient of friction in a centrifugal pendulum vibration absorber (CPVA) test device

CERTIFICATIONS

Six Sigma Black Belt – Bend, Peabody, MA July 2020 – Present

Engineer in Training (EIT) – MA License No. 26588 Oct. 2021 - Present