



# Zach Brock

## Manufacturing Engineer

 608-445-9949

 [zbrock.eng@gmail.com](mailto:zbrock.eng@gmail.com)

 1120 Fitness Run · Sun Prairie · WI

Recent Mechanical Engineering graduate with proven ability to improve quality, safety, and efficiency of manufacturing processes. Industry experience in the sheet metal and building supply industry. Excellent programming and software engineering skills with emphasis on developing in-house software applications for industrial and engineering related needs.

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## Experience

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### Trachte Building Systems *Manufacturing Engineer* May 2020 – Sep 2020

- Produced straightforward desktop application for use by production floor employees that enabled use of barcode scanners at each workstation to load part drawings, eliminating large amounts of unnecessary paper waste
- Coordinated with production teammates to improve current manufacturing processes based on 5S & lean manufacturing methods
- Commissioned two new SAMCO roll formers. Worked with machine manufacturers to efficiently debug and setup both lines. Trained employees on new equipment
- Coded an excel plugin for importing part orders directly into machine work scheduler, cutting scheduling time down from several hours to <20 minutes
- Wrote technical work instructions documenting safe equipment operating procedures

### Senior Design Project – Tab Breaking *Sponsored by CTECH Manufacturing*

- Tasked with replacing an inefficient, manual sheet metal tab breaking process
- Designed a table that uses high frequency vibration to break the tabs
- Used modern engineering tools (Ansys FEA) to derive an effective motor frequency

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## Education

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<b>Bachelor of Science: Mechanical Engineering</b>	GPA: 3.74
University of Wisconsin – Platteville (ABET Accredited)	May 2021

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## Key Skills / Software Competencies

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| • Lean Six Sigma Manufacturing Process Improvement & 5S Workspace Standards | • PLC Programming                          |
| • AutoCAD / SolidWorks  | • Software Version Control - Git / GitHub  |
| • Programming in C, C++, Python, C#, Java, and MATLAB                       | • Excel VBA / Macro Development            |
| • Welding / General Carpentry   | • Computational Fluid Dynamics – STAR-CCM+ |
|   | • Finite Element Analysis – Ansys          |

### Additional Employment

*Painting Contractor* | **Brock Painting** | Sep 2016 – Current  
*Interior Carpenter* | **Miller Custom Homes** | Jan 2016 – Sep 2016  
*Music Instructor* | **Sound of Sun Prairie** | Jan 2015 – July 2019  
*Private Lesson Teacher* | **Self-Employed** | Jan 2015 - Current