

# Matthew Radtke

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## Education

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### University Of Wisconsin - Madison

BS IN COMPUTER SCIENCE

GPA: 3.5

Madison, WI

September 2016 – December 2019

## Work Experience

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### Miller Electric

WEB DEVELOPER INTERN

- Rebuilt outdated internal applications in a modern language to be more accessible by users and maintainable by developers
- Built custom full stack applications from scratch for assisting order validation and shipping in C#

Appleton, WI

May 2018 – January 2020

### Miller Electric

WEB DEVELOPER

- Worked with digital marketing team members to implement front and backend features onto the ITW Welding Public Websites in a Sitecore C# Environment
- Troubleshot and created solutions for various issues with the Public Websites via ticketing system
- Developed tools to integrate and synchronize product information for multiple companies across multiple environments
- Developed and maintained a console label application to assist with warehouse operations
- Developed C# API endpoints to integrate with Public Website needs such as registering products for customers
- Rebuilt a multi-site solution with best modern practices to allow faster future development in Sitecore and C#

Appleton, WI

January 2020 – Present

## Skills

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**Programming Languages:** C#, JavaScript, jQuery, SQL, Java, C++, C, Python, React

**Programming Skills:** Algorithms, Optimization, Machine Organization, Web Development, Unit Testing

**Tools:** Sitecore, Git, Linux, bash, SSMS, Powershell, SQL Server, Entity Framework, Linq

## Projects

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### C++ Object Relational Mapper

C++, sqlite

A CONSOLE APPLICATION THAT READS FROM A SQLITE DATABASE FILE AND GENERATES C++ FILES AND CLASSES AUTOMATICALLY. THIS ALLOWS A C++ PROGRAM TO INTERACT WITH AND MODIFY A SQLITE DATABASE VIA OBJECT ORIENTED PROGRAMMING.

<https://github.com/mradtke9019/Library-System/tree/master/Object-Relational-Mapper>

### Library System

C#, C++, SQL Server, sqlite

THIS PROJECT IS AN IMPLEMENTATION OF A LIBRARY SYSTEM. IT CONSISTS OF TWO SEPARATE IMPLEMENTATIONS, ONE IN C++ AND ONE IN C#. THEY USE AN ACCOUNT/IDENTITY SYSTEM, CHECKOUT BOOKS, ADD BOOKS, ETC. THE C# APPLICATION USES A MICROSOFT SQL SERVER DATABASE WHILE THE C++ PROJECT UTILIZES THE SQLITE OBJECT RELATIONAL MAPPER TO STORE DATA INTO THE DATABASE.

<https://github.com/mradtke9019/Library-System>

### Graphics Town

JavaScript, WebGL

GRAPHICS APPLICATION WRITTEN IN JAVASCRIPT THAT UTILIZES MANY PIECES OF THE RENDERING PIPELINE TO CREATE A VISUALLY INTERESTING 3D SCENE. CONCEPTS INVOLVED INCLUDE: TEXTURING, TEXTURE COORDINATES, MULTI TEXTURED SURFACES, BUMP MAPPING, PROGRAMMING 3D MODELS, 3D MODELLING TRANSFORMS AND BASIC TRANSFORMS VIA TWGL, WORKING WITH WebGL, FRAGMENT/VERTEX SHADER PROGRAMMING, CREATING A SKYBOX, AND HERMITE CURVES.

<http://pages.cs.wisc.edu/~radtke/GraphicsTown/p7.html>

### WI Shell

C, Linux

CREATED A BASIC SHELL IN C THAT CAN EXECUTE OTHER PROGRAMS. IMPLEMENTED SOME OF THE BASIC FEATURES OF A SHELL INCLUDING HISTORY, CD, REDIRECTION, AND SETTING THE PATH VARIABLE TO FIND BINARY EXECUTABLES. EXECUTION OF EXECUTABLES INVOLVES FORKING A CHILD AND REPLACING THE CHILD'S CODE SEGMENT WITH THE NEW EXE'S CODE SEGMENT. PARENT SHELL THEN WAITS FOR CHILD TO FINISH EXECUTION.

<https://github.com/mradtke9019/WI-Shell>