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Portfolio: <https://bdswartz.github.io/portfolio-react/>

GitHub: <https://github.com/bdswartz>

Summary:

Full-Stack Web Developer with a Certificate in Full Stack Web Development from the University of North Carolina - Chapel Hill. Currently using technologies such as HTML/CSS, Javascript, Node.js, Express.js, MySQL, MongoDB, GraphQL, and React along with my problem-solving skills to perform debugging and continuous improvement of previous applications and to conceive and develop new ones. With my previous education and work experience I have become skilled at managing engineering projects, troubleshooting processes, and analyzing technical data. My goal is to continue growing my skill with web technologies and leverage the professional skills that I have developed managing projects and engineering creative real-world solutions to complex problems.

Skills and Technologies

Core Competencies:

- Project Management
- Training and Talent Development
- Data Analysis
- Capital Management
- Process Engineering
- Operations Management
- Compliance Auditing and Documentation
- Cause Analysis

Front End Stack

- React.JS
- GraphQL APIs - Apollo Client
- JavaScript
- HTML 5
- CSS 3
- Lightning Web Components
- jQuery
- RESTful APIs

Back End Stack

- Node.js
- Express.js
- RESTful APIs
- Apex
- Ruby on Rails
- GraphQL API – Apollo Server
- MySQL DB
- NoSQL - DynamoDB and MongoDB
- Test Driven Development – Jest

Other Skills, Technologies, and Frameworks

- Version Control: Git, GitHub
- Heroku
- NPM
- Object Oriented Programming
- MVC framework

Projects:

Gardener's Forum

GitHub: <https://github.com/bdswartz/garden-forum>

Website: <https://gardenforum.herokuapp.com>

- A MERN Full-Stack web application that allows gardeners to build and maintain their virtual garden by connecting with other gardeners. The application features a React front end that draws on Material UI widgets and a customized CSS style guide. It also uses JSON Web Token authentication and GraphQL APIs to move data between the front end and a MongoDB backend database.
- MongoDB, Express, React, Node, Mongoose ODM, GraphQL APIs, JavaScript, Third Party API, HTML, CSS, and Material UI

Scout Pet Service

GitHub: <https://github.com/bdswartz/pet-care-marketplace>

Website: <https://scout-pet-service.herokuapp.com/>

- Full Stack express web server application with MVC architecture that utilizes Handlebars html templating package. The application features back-end APIs with data sorting and custom filtering capabilities.
- Express, mySQL, Sequelize ORM, JavaScript, Server-Side APIs, HTML, Bootstrap, and CSS with MVC Architecture

Weather Dashboard

GitHub: <https://github.com/bdswartz/weather-dashboard> | Website: <https://bdswartz.github.io/weather-dashboard/>

- A mobile responsive application that uses the geolocation API to get a user's location and interacts with the OpenWeather third party server through their API to get current weather and a 5-day forecast. Users can choose to use the geolocation data from their device or perform a location search by city string or US zip code. Cities that are searched by the user are continually updated and saved in browser storage for later use.
- JavaScript, Web DOM API, Geolocation API, OpenWeather Third Party API

Event Outlook

GitHub: <https://github.com/bdswartz/event-outlook> | Website: <https://bdswartz.github.io/event-outlook/>

- A mobile responsive application which gathers near-term weather conditions and local events from the OpenWeather and Ticketmaster servers via their respective APIs. It uses JavaScript to take user input of zip code and distance from one's location and gives back corresponding weather and live event info for the upcoming five days.
- JavaScript, Window DOM API, OpenWeather and Ticketmaster Third Party APIs, HTML, and CSS

Employment:

SmallWorld

Chicago, IL

October 2022 – Present

Software Developer

- Full stack software developer for a startup SaaS application. Responsible for implementing features, addressing bugs, and developing documentation in an agile development environment. Primary job responsibilities include developing UI changes using the Lightning Web Component framework as well as creating and modifying callouts to an external Ruby on Rails application using a statically typed, compiled backend language based on the Java programming language (Apex). Although not my primary responsibility, worked to create new and modify existing Ruby on Rails API endpoints to accommodate developing features and troubleshooting bugs in area of primary responsibility.

FMC

Bessemer City, NC

November 2014 – 2018

Engineering Manager

- **Project Manager** – Coordinated requirements, schedules, and activities for a cross-functional project team that designed and executed a project to provide a \$1MM sealing system to the lithium hydroxide finished project dryer.
- **Facility Capital Portfolio Manager**– Implemented systems to develop a 5-year capital plan based on the strategic goals of the business and allocate an \$8.5MM annual capital budget to support that

plan. Implemented staged gate/project design review system to ensure projects fulfilled business objectives.

- **Divisional Technology Roadmap Team** - Part of a team that was charged with developing the Lithium Division Technology Roadmap for the next 7-10 years. Worked with a team consisting of Process Technology, Research and Development, and Sales and Marketing representatives from the Worldwide Lithium Group to develop a technology roadmap that will was presented to the Lithium Senior Leadership Team.

Lincolnway Energy LLC

Ames, IA

April 2012 – May 2014

Plant Engineer

- **Project Manager** – Coordinated cross-functional team (Engineering, Compliance, Operations, Construction, Accounting) to develop vision and strategy to convert the fuel mix in support of reducing greenhouse gas (GHG) emission for the facility.
 - Built the business case based on my analysis of true cost of ownership and shifts in US fuel markets including a detailed sensitivity analysis
 - Presented viable alternatives and recommendations to Board of Directors, Chief Executive Officer (CEO), Chief Financial Officer (CFO), and Plant Manager
 - Acted as Project Manager for the two main projects resulting from the analysis.
- **Process Engineer** - Developed systems to collect operations data used in a quantitative model to evaluate and optimize fermentation performance.
 - Collected operational data by pulling data from process database using database API
 - Analyzed operational data using Excel Data Analysis tools (regression and multiple regression)
 - As part of the operation performance measurement model, developed innovative ways to increase the reliability of results by creating new independent variables using existing data.
 - Created new independent variables to recommend operational changes; increasing corn-to-ethanol yields by approximately 5%.
 - Used process historian API to convert from time-based maintenance strategy to a predictive strategy

Flint Hills Resources

Menlo, IA

April 2007-March 2012

- **Process Engineer** - Provided process engineering technical expertise for a 100 million gallon per year fuel ethanol facility.
 - Created engineering and operations training curriculum and training materials used to prepare a group of 35 newly-hired employees. Mentored new hires on all technical aspects of plant operations.
 - Optimized unit operations including daily optimization of processes; decreasing raw material waste and energy usage.
 - Created company-wide management system documentation for process safety compliance under OSHA 29 CFR 1910.119 (Process Safety Management).
- **Plant Manager** - Facility leader accountable for all site operations and government compliance for a 100 million gallon per year fuel ethanol production facility. Led a team of 6 direct and approximately 50 indirect reports.

Education

[Certificate in Full-Stack Web Development](#), University of North Carolina – Chapel Hill

A program that focuses on learning technical programming skills in HTML, CSS, JavaScript, jQuery, Bootstrap, Node.js, MySQL, MongoDB, Express, and React and using those technologies to complete interactive web development projects.

Masters of Business and Administration (MBA), University of Iowa, Iowa City, IA,

Bachelor of Science (BS), Chemical Engineering, Iowa State University, Ames, IA