BRIAN D. SWARTZ   Charlotte, NC

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                                            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 to continuously improve upon previous projects 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 real world solutions to complex problems.

Core Competencies:

- Project Management
- Data Analysis
- Capital Management
- Process Engineering

- Operations Management
- Compliance Auditing
- Cause Analysis
- Training and Talent Development

Technologies:

Version Control: Git, GitHub

Front-End Stack
- React
- JavaScript, jQuery, and jQuery UI
- HTML and CSS
- DOM Document API
- CSS Frameworks: Bootstrap, Materialize
- Fetch/Third Party APIs
- Material UI

Back-End Stack
- Node.JS
- Express.JS, Express-Sessions
- REST/APIs, JSON
- MySQL, Sequelize ORM
- MongoDB, Mongoose ODM
- Apollo Graph QL
- JSON Web Token Authentication

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 components, uses JSON Web Token authentication, and moves data using GraphQL queries and mutations to a MongoDB back end database.
- MongoDB, Express, React, Node, Mongoose ODM, Apollo GraphQL, JavaScript, Server-Side APIs, 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 single page 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:

FMC	Bessemer City, NC	November 2014 – 2018

Engineering Manager
- **Project Manager** – Managed 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
- **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)

- o 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.
- o Created new independent variables to recommend operational changes; increasing corn-to-ethanol yields by approximately 5%.
- o 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.
    - o Created engineering and operations training curriculum and training materials used to prepare a group of 35 newly-hired employees
    - o Optimized unit operations including daily optimization of processes; decreasing raw material waste and energy usage.
    - o 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 in 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