Zachary A. Flegle | zflegle3@gmail.com | (404) 790-1309

https://github.com/zflegle3 | https://www.linkedin.com/in/zflegle/ | https://zflegle3.github.io/portfolio/

Programming Experience

Powderly – Ski Conditions Tracking Application

<u>Live Demo</u> | Source Code

(JavaScript, React.js, Node.js, Express, MongoDB, Mongoose, Redux, Jason Web Tokens, Google Maps API, SASS, Vercel)

- Built a Google Maps based winter weather application that enables users to search and sort real-time ski conditions at over 400 ski resorts across the United States
- Developed a RESTful API to facilitate all user CRUD functions including user authentication, updating profile details, saving favorite ski resorts, uploading profile images, and displaying ski condition data
- Managed authentication states with Redux and JSON Web Tokens to enable secure registration, login, and password reset
- Implemented a fully responsive design to deliver an intuitive user experience across various device screen sizes

Where's Waldo Photo Tagging Application

Live Demo | Source Code

(JavaScript, HTML, CSS, React.js, Google Firebase)

- Developed a full-stack photo tagging game application that allows users to play Where's Waldo and compare high scores
- Implemented a Google Firebase Cloud Firestore database to store gameplay data and user scores

Rock Paper Scissors - Game Challenge

Live Demo | Source Code

(React.js, SASS, JavaScript, GSAP)

- Built a responsive Rock Paper Scissors game application to match the challenge design files from Frontend Mentor
- Employed fully responsive layouts and animations to display gameplay information based on the device's screen size

Battleship Game vs Computer AI

Live Demo | Source Code

(JavaScript, HTML, CSS, Npm, Webpack, Jest)

- Created a single player game application using Test Driven Development (TDD) methodologies and Jest testing framework
- · Programmed an AI opponent that simulates human decision-making to provide users with an engaging gaming experience

Technical Skills

Languages: HTML, CSS, JavaScript, TypeScript, Matlab, Python

Frameworks/Libraries/Databases: Node.js, Express, MongoDB, Mongoose, React.js, Redux, SASS, Bootstrap, GSAP

Tools & Miscellaneous: Git, Github, Npm, Webpack, Jest, Postman, Figma, Vercel, Google Firebase, Pug

Education

Georgia Institute of Technology

Atlanta, Georgia

Bachelor of Science in Mechanical Engineering

August 2013 - May 2018

Professional Experience

Procter & Gamble

Cincinnati, Ohio

Global Material Developer

February 2021 – December 2021

- Assumed responsibility of premium pad topsheets, by successfully maintaining strong supplier relationships, establishing robust material specifications, conceptualizing, and executing research, and collaborating with project stakeholders
- Led the research, development, and implementation of 4 new nonwoven topsheet materials, resulting in an annual net savings of \$2 million and the mitigation of supply chain risks caused by the COVID-19 pandemic

Gulfstream Aerospace Operations Engineer II

Savannah, Georgia

January 2020 – December 2020

- Served as the process owner for the aft section of two start-up aircraft programs by leveraging manufacturing expertise to optimize aircraft production, enhance design, and deliver a superior quality product for Gulfstream customers
- Successfully led the development and implementation of a production conformity software, resulting in the resolution of over 300 discrepancies and the establishment of proper engineering configuration on all aircraft

Operations Engineer I

July 2018 – December 2019

- Identified discrepancies in the aft longitudinal splice design and effectively collaborated with a cross-functional team to redesign the structures, resulting in an annual cost savings of \$126,000 per aircraft program per year
- Led design reviews with cross-functional teams to optimize the manufacturability of more than 200 engineering models

Co-Op Program Steering Team Member

July 2018 – December 2020

• Supervised a weekly mentorship program aimed at imparting professional development skills to engineering students and providing practical opportunities to apply the acquired knowledge