

Zachary A. Flegle

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Programming Experience

Powderly – Ski Conditions Tracking Application

[Live Demo](#) | [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 450 ski resorts across the United States
- Developed a RESTful API to facilitate all user CRUD functions including authentication, updating profile details, saving favorite ski resorts, uploading profile images and receiving 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

E-Commerce Credit Card Payment Form

[Live Demo](#) | [Source Code](#)

(Typescript, CSS, Webpack, GSAP)

- Created a fully responsive credit card payment form that instantly displays a confirmation of users' payment information
- Enabled client side input verification and error handling of form inputs to provide an intuitive user experience

Where's Waldo Photo Tagging Application

[Live Demo](#) | [Source Code](#)

(JavaScript, HTML, CSS, React JS, Firebase Cloud Firestore)

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

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: React.js, Redux, SASS, Bootstrap, GSAP, Node.js, Express, MongoDB, Mongoose

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

Education

Georgia Institute of Technology

Atlanta, Georgia

Bachelor of Science in Mechanical Engineering

August 2013 – May 2018

Professional Experience

Proctor & 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

Savannah, Georgia

Operations Engineer II

January 2020 – December 2020

- Served as the process owner for the aft section of two start-up aircraft programs, 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