CHRISTOPHER BOWMAN

New London, CT

Full Stack Developer

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OBJECTIVE

I'm a full stack developer, incorporating my versatile experience in software development and mechanical engineering. As well as 1 year of Teaching Assistant experience. Creative, highly-motivated, and adaptable professional who is able to work with stakeholders to create useful and user-friendly applications. I specialize in full-stack JavaScript technologies with SQL and NoSQL databases.

TECHNICAL SKILLS

Languages - Typescript | Python | JavaScript | SQL | Mongo | JSON | EJS | HTML | CSS | MATLAB
Databases - PostgreSQL | MongoDB
Libraries and Frameworks - React.js | Express.js | Django | Flask
Softwares - ABAQUS | Altair HyperWorks | ANSYS | Fluent | SolidWorks | Mathcad | Microsoft Office
Interpersonal Skills - Communication Skills | Collaboration

SOFTWARE DEVELOPMENT PROJECTS

Millie's Messenger - Sockets.IO | MongoDB | Express | React.js | Node.js | HTML | CSS | JSON 2/2023
Capstone Chat is an app designed to live chat with other users in real time using Sockets.IO. A user can login and send private messages to other users, join a live chat room, and set away statuses.

- Utilized Sockets.IO, MongoDB, Express, React.js, and Node with JSON Web Tokens and Bearer authorization to deploy client and server to Netlify and Heroku, respectively.
- Incorporated MongoDB Change Streams to send data updates from the server to the client using Socket.IO for private messaging features.
- Integrated Socket.IO-client to send messages and responses to public chat without storing to MongoDB.

FotoBook - MongoDB | Express | React.js | Node.js | HTML | CSS | JSON 1/2023
FotoBook is a reverse engineering of Instagram with login/ authorization, profiles, posting, commenting, and editing functionality. You can post Images and save them to your custom profiles collection that will display on the explore page.

- Collaborated with a team of 2 software developers to design a web page using MongoDB, Express, React.js, and Node with full CRUD functionality.
- Developed user authorization with JSON Web Tokens and Bearer authorization method.
- Deployed front client and server to Netlify and Heroku, respectively.

HAPI HOUR - React.js | JavaScript | HTML | CSS | Grid | Flexbox 12/2022
HAPI Hour is an app built to help you find drink recipes from the cocktail db API. You can search by name/ phrase, search by ingredient, choose a random drink, or start with a base ingredient choice and browse.

- Optimized React.js to make multiple calls to a third party API.
- Organized the React component structure to be DRY.
- Displayed a high level understanding of React.js, JavaScript, HTML and CSS.

PROFESSIONAL WORK EXPERIENCE

General Dynamics Electric Boat | Solid Mechanics Structural Engineer II | (Remote/ Hybrid) 6/2020 - 11/2022

- Produced and solved mathematical models of great complexity using ABAQUS scripting, a Python object-oriented programming language, for Virginia and Columbia class Submarines.
- Analyzed components using the Finite Element Method with ABAQUS/CAE, Python based house code software, and post processing techniques including hand calculations.

- Utilized static and dynamic structural analysis to support design and shock qualification of internal and external shipboard items.
- Performed analysis for advanced applications including predictive weld distortion, fatigue and fracture, combined shock and submergence, composite materials, thermal, and thermo-mechanical.
- Obtained Secret level security clearance and was promoted to Structural Engineer II as a result of multiple above satisfactory reviews.

University of Massachusetts, Amherst | Teaching Assistant | (On Site) 1/2019 - 12/2019

- Supported classes for "Theory- Modeling Principles and Applications in Finite Element Analysis" and "Machine Component Design".
- Accurately graded over 300 mini projects of high technical difficulty.
- Hosted well attended office hours twice a week for 14 weeks in 2-3 hour sessions to help students with questions and projects.

EDUCATION

General Assembly 2/2023

Software Engineering Immersive, Bootcamp

- Full stack software engineering immersive student in an intensive, twelve-week, 450+ hour program focused on product development fundamentals, object-oriented programming, MVC frameworks, data modeling, and team collaboration strategies. Developed a portfolio of individual and group projects.

University of Massachusetts, Amherst 5/2020

Bachelor of Science in Mechanical Engineering, GPA: 3.44

- Relevant coursework includes Intro to Computer Science, Linear Algebra, Differential Equations, Multivariable Calculus, Engineering Statistics, and MATLAB programming.
- Wrote a MATLAB code using the "Shinozuka Method" to create a synthetic time series to simulate wind turbulence and prepared the final report to compare statistics and justify the accuracy to a TurbSim generated synthetic time series.