

# Christopher Bowman

Software Engineer | Located in New London, CT | 508-302-9166 | [cbowman.se@gmail.com](mailto:cbowman.se@gmail.com) | [Github](#) | [Portfolio](#) | [LinkedIn](#)

## Technical Skills

**Languages & Technologies:** Python | JavaScript | Java | C++ | SQL | WordPress | Webflow | Figma

**Libraries & Frameworks:** React.js | Next.js | Express.js | Django | Flask

**Databases:** PostgreSQL | MongoDB

**Cloud Services:** Amazon Web Services ( AWS )

**CAD/ FEA Softwares:** ABAQUS | Altair Hyperworks | ANSYS | Fluent | SolidWorks | Creo | Blender

## Professional Work Experience

Academic Tutor | **Parliament Tutors** | 10/2023 - Present

- Provide tutoring to US Coast Guard Academy cadets in Statics and Mechanics of Materials.
- Provide tutoring to veterans through the US Department of Veterans Affairs in Statics, Multivariable Calculus, and Physics 2.

Software Engineer | **NextGen** | 8/2023 - Present

- Worked with a team of 6 software engineers to design and build the company website with **Next.js**, **React.js** and **Tailwind CSS**.
- Helped architect a **Node/Express RESTful API** using **PostgreSQL** as the backing data store.
- Created curriculum utilizing **Notion** and **GitHub** for collaborative project management. The final curriculum included sections that cover: **HTML/CSS**, **JavaScript**, **data types**, **objects**, **classes**, and **methods**.

Senior Software Engineer | **Scott's Landscaping, Inc** | 2/2023 - Present | (<https://scottslandscaping.org>)

(<https://github.com/cbowman422/scottslandscaping>)

- Designed and built a responsive web application with **React.js** to replace the company's old and dated website.
- Improved overall accessibility (**A11y**) across devices and increased user retention rate by 15%.
- Enhanced user experience and user interface (**UX/UI**), resulting in a 30% increase in website engagement and a 20% decrease in bounce rate.
- Managed the transfer of the **domain registrar**, **email hosting**, and updated **DNS records** to **Namecheap** and **Vercel** resulting in a 60% decrease in annual hosting cost.
- Worked closely with the team at Scott's Landscaping to ensure that downtime was kept to a minimum and ensure changes did not impact day-to-day business.
- Managed email complications by executing a transfer from **POP** to **IMAP** resulting in a 100% decrease of lost emails.

DevOps Engineer Internship | **SpaceLab** | 6/2023 - 8/2023 | (<https://spacelab.space/>)

- Built scalable backend environment utilizing cloud-native functionalities (**AWS EC2**, **AWS Fargate**, etc.)
- Led the charge to design the cloud-native deployment system using **AWS Fargate** and **Docker** to achieve scalability while also balancing cost.
- Leveraged ChatGPT to help improve my knowledge in **AWS**, **GraphQL**, and **Docker**.

Solid Mechanics Structural Engineer II | **General Dynamics Electric Boat** | 8/2020 - 10/2022

- Produced Finite Element Analysis (FEA) models for 2 Virginia and 1 Columbia class Submarine, using ABAQUS scripting and **Python**.
- Specialized in FEA with ABAQUS and multiple software programs and post processing techniques.
- Performed static and dynamic structural analysis to support design and shock qualification of internal and external shipboard items using the finite element method of hand calculations.
- Conducted research, development, technical consulting, and application of state-of-the-art computational engineering analysis methods and software.
- Completed complex analysis for advanced applications including predictive weld distortion, fatigue and fracture, combined shock and submergence, composite materials, thermal and thermo-mechanical
- Performed assessment and evaluation of significant shipyard facility structures used to enable submarine construction.
- Secret Level Security Clearance.

Teaching Assistant | **University of Massachusetts, Amherst** | 1/2019 - 12/2019

- Supported two classes for “Theory- Modeling Principles and Applications in Finite Element Analysis” and “Machine Component Design”, gaining leadership experience.
- Accurately graded over 300 mini projects of high technical difficulty.
- Hosted 2 and 3-hour, well attended, office hour sessions twice weekly for 14 weeks to help students with questions and projects.projects of high technical difficulty.

## Education

**University of Massachusetts, Amherst** | Bachelor of Science in Mechanical Engineering | 5/2020 | GPA 3.44

- Relevant coursework includes: Pre-Calc, Calculus 1 & 2, Multivariable Calculus, Differential Equations, Statics, Dynamics, Engineering Statistics, Linear Algebra, Intro to Computer Science and Intro to Electrical Engineering.

**General Assembly** | Software Engineering Immersive | 2/2023

- Focused on product development fundamentals, object-oriented programming, MVC frameworks, data modeling, and team collaboration strategies.
- Mentored students during group work and provided support with debugging code.

## Software Development Projects

**Bowman Games** | 9/2023

Tech Stack : **C++** | Unreal Engine 5 | Blender | Ableton Live 11

- Building a video game using **C++**, Unreal Engine 5, Blender and Ableton Live 11.

**Money Mania** | 3/2023 | (<https://github.com/cbowman422/Money-Mania-Frontend>)

Tech Stack : **MongoDB** | **Express** | **React.js** | **Node.js** | **HTML** | **CSS**

- Developed a **MERN** application geared towards student finance education, which placed 1st place in the GA 2023 Gamifying Hackathon.
- Led a team of 3 UX/UI designers and 4 software engineers to accomplish MVP in a 4-day sprint.
- Designed the software architecture to fit the requisites of the React framework.
- Responsible for the **Node.js**, **Express**, and **MongoDB RESTful** back-end server and rebuilding 3 **React.js** front-end pages.

**Messenger** | 2/2023 | (<https://github.com/cbowman422/messenger>)

Tech Stack : **Socket.IO** | **MongoDB** | **Express** | **React.js** | **Node.js** | **HTML** | **CSS**

- Project Lead for a dynamic messaging **MERN** application employing **Socket.IO** for real-time chat room messaging.
- Responsible for integrating a new library, **Socket.IO**, into a **MERN** application with authorization in order to accomplish MVP in a 1-week sprint.