My Final Project Website

Jonathan Bam

Web Site Development

Personal Portfolio Website

1. What Type of Website Was Built and Why

This final project is a multi-page personal portfolio website designed to present my professional profile as a Cyber Security student. The website serves as a digital portfolio that introduces my background, skills, and interests in cyber security while demonstrating my technical competence in HTML, CSS, and Bootstrap 5.

I chose a portfolio website because it aligns well with my career goals and provides a professional platform that could realistically be shared with potential employers, lecturers, or collaborators. The website focuses on clarity, professionalism, and accessibility, while maintaining a modern and visually engaging design.

2. HTML and CSS Features Used

The website was built using semantic HTML5 elements to ensure proper structure and accessibility. Elements such as <header>, <nav>, <section>, <footer>, and <form> were used to create a clear content hierarchy and improve readability for both users and assistive technologies.

Custom CSS was applied through an external stylesheet (styles.css) to enhance Bootstrap's default appearance. The custom styling focuses on:

A consistent dark-themed color palette suitable for a cyber security profile

Improved typography and spacing for readability

Hover effects and transitions to improve user experience

Section padding and layout consistency across all pages

This approach allowed me to personalize the website while still benefiting from Bootstrap's responsive layout system.

3. Bootstrap Components Used

Several Bootstrap 5 components and utilities were used throughout the website to enhance both functionality and appearance:

Navbar: A responsive navigation bar used on all pages to allow easy navigation between Home, About, and Contact pages.

Grid System: Containers, rows, and columns were used to structure content and ensure responsiveness on different screen sizes.

Cards: Used to display skills and testimonials in a clean and professional format.

Buttons: Styled call-to-action buttons were used in the hero section and contact page.

Forms: A Bootstrap form was used on the contact page with appropriate labels for accessibility.

Utility Classes: Bootstrap utility classes such as spacing, text alignment, display, and background utilities were used extensively.

These components helped ensure consistency and responsiveness while reducing the need for excessive custom code.

4. How the Website Was Made Responsive

Responsiveness was achieved using Bootstrap's grid system and responsive utility classes. Columns automatically adjust based on screen size, ensuring that content remains readable and visually balanced on desktops, tablets, and mobile devices.

The website was tested using Chrome Developer Tools by simulating various device sizes, including smartphones and tablets. Adjustments were made to spacing and layout to ensure a smooth user experience on smaller screens.

A screenshot of the mobile layout has been included in the appendix to demonstrate successful responsive design implementation.

5. Accessibility Considerations

Accessibility was considered throughout the development process. The following measures were implemented:

All images include descriptive alt attributes.

Social media icons and interactive elements include aria-labels.

Proper heading hierarchy was maintained for screen readers.

Form inputs include associated labels for clarity.

Additionally, the website was reviewed using Google Lighthouse to identify accessibility improvements. These steps help ensure that the website is usable by a wider range of users.

6. Challenges Faced and Solutions

One challenge encountered during development was ensuring that all assets, such as images and icons, loaded correctly when deployed on GitHub Pages. This issue was resolved by carefully reviewing file paths and maintaining consistent folder naming.

Another challenge was balancing custom CSS with Bootstrap's built-in styles. This was addressed by avoiding overrides of Bootstrap's core layout classes and instead using custom classes to enhance appearance without breaking responsiveness.

7. Learning Reflection

This project helped strengthen my understanding of responsive web design and the practical use of Bootstrap 5. I gained valuable experience in structuring multi-page websites, organizing asset and applying accessibility best practices.

I also learned the importance of design consistency and user experience, especially when building a website intended for professional presentation. Overall, this project improved both my technical skills and my confidence in web development.

8. Self-Assessment

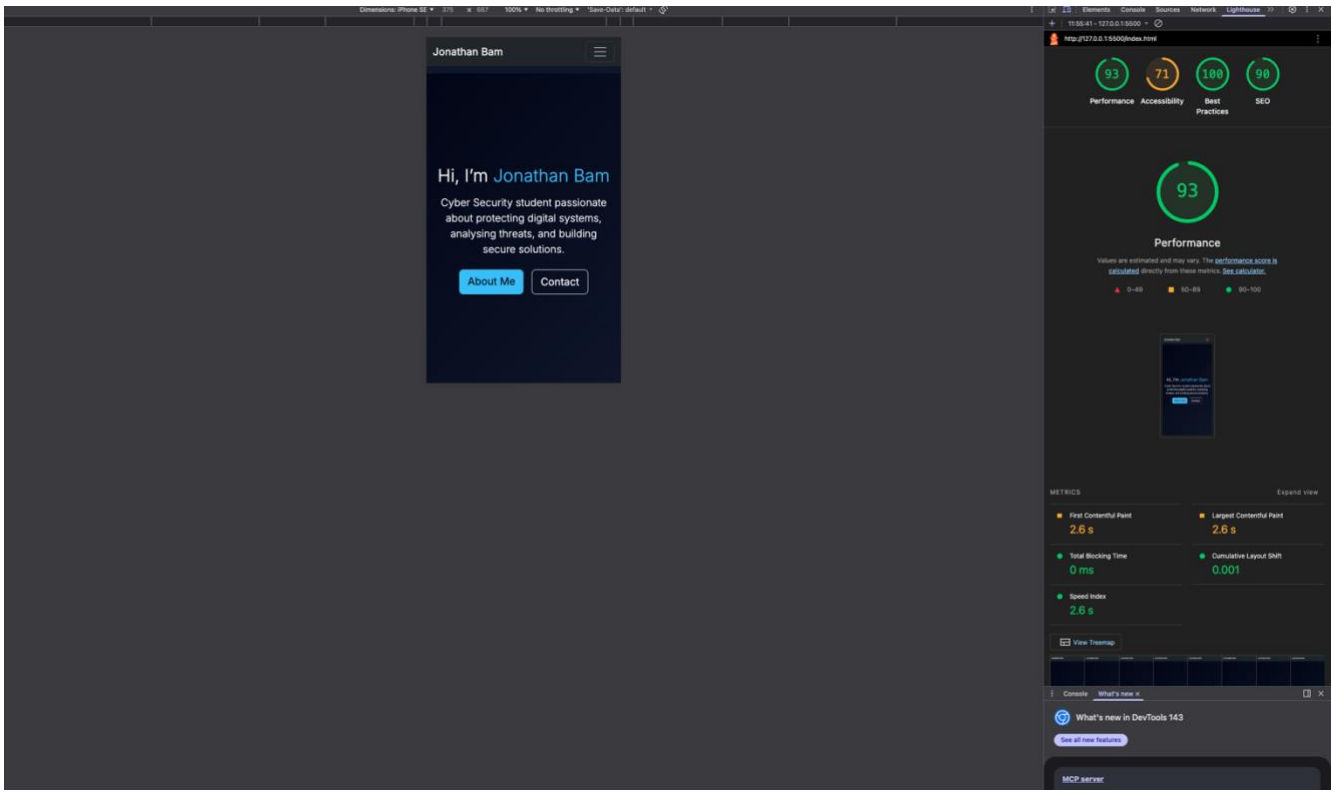
I would give myself a grade of 4 out of 5 for this project.

I successfully met all assignment requirements, implemented responsive and accessible design principles, and created a professional looking portfolio website. While the project is strong, there is still room for future improvement, such as adding more advanced interactivity or backend functionality.

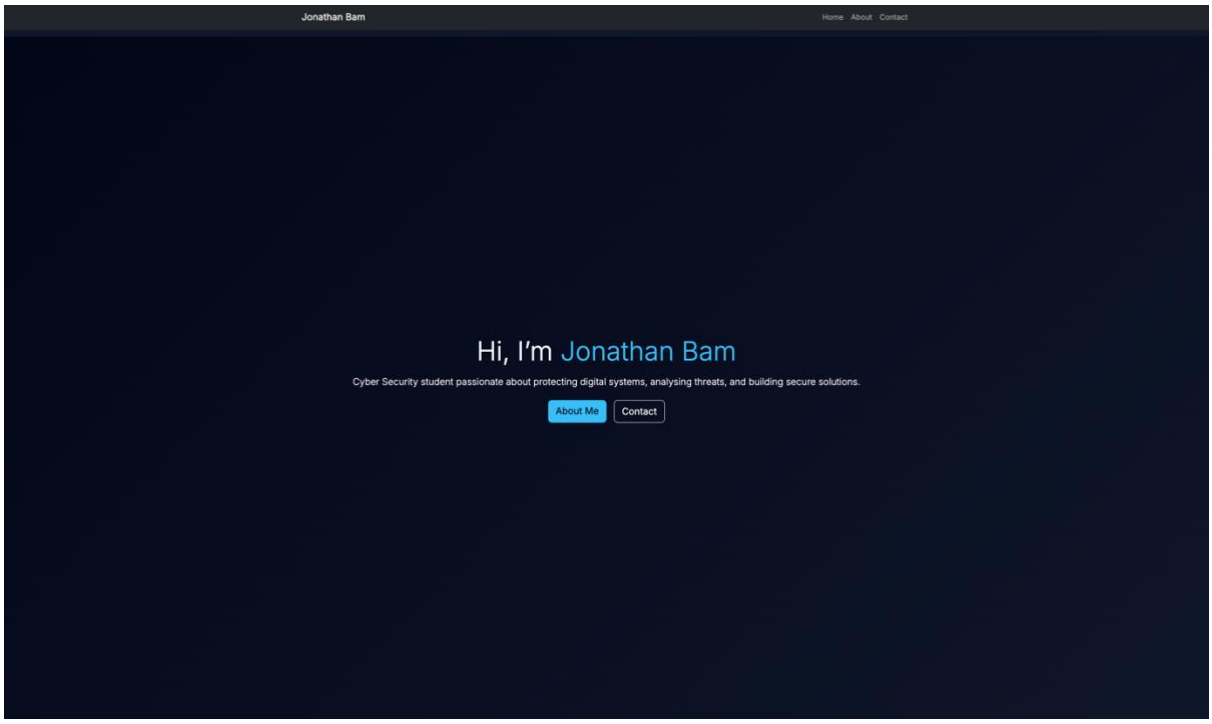
9. Appendix (Screenshots)

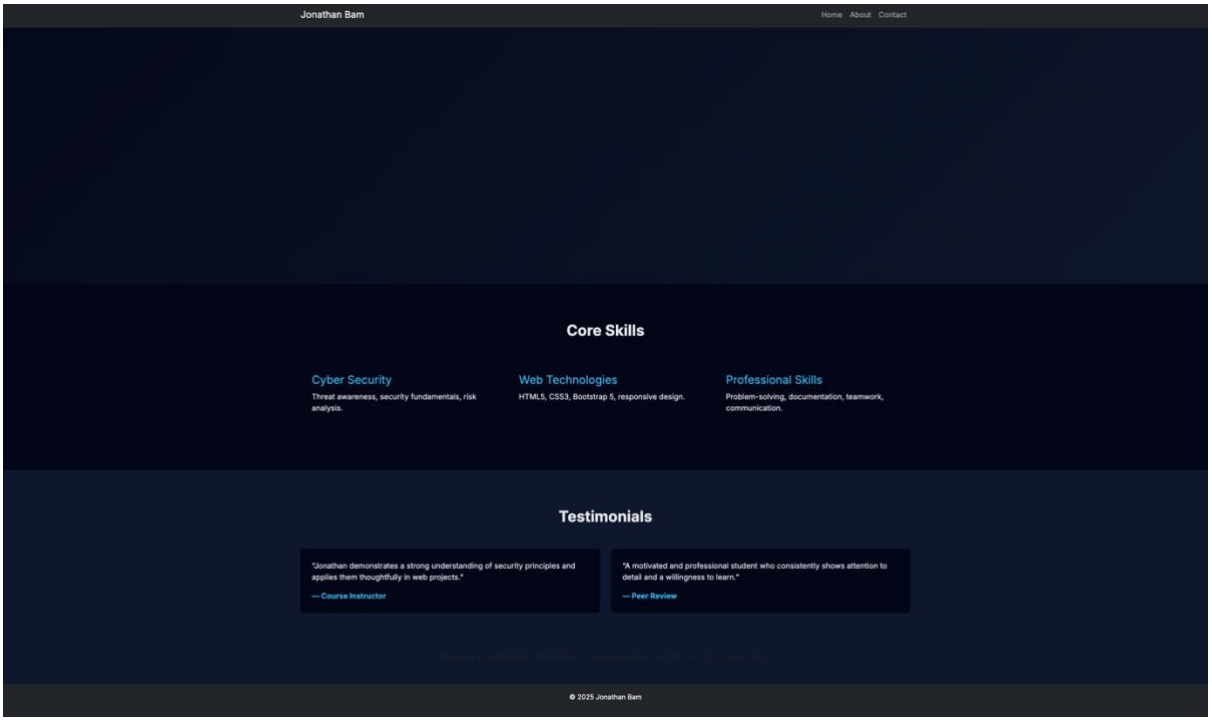
The appendix includes screenshots demonstrating:

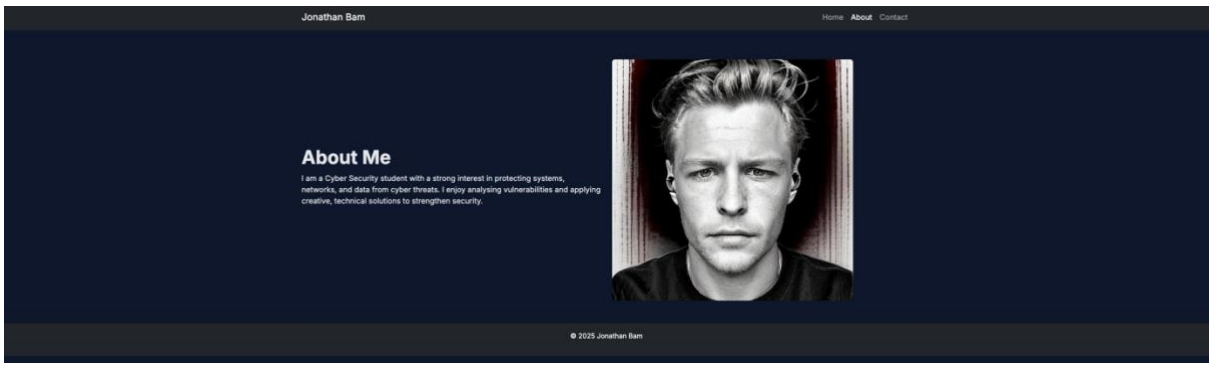
Mobile responsiveness using browser developer tools



Key layout sections of the website






Jonathan Bam
Home About Contact
About Me
I am a Cyber Security student with a strong interest in protecting systems, networks, and data from cyber threats. I enjoy analysing vulnerabilities and applying creative, technical solutions to strengthen security.
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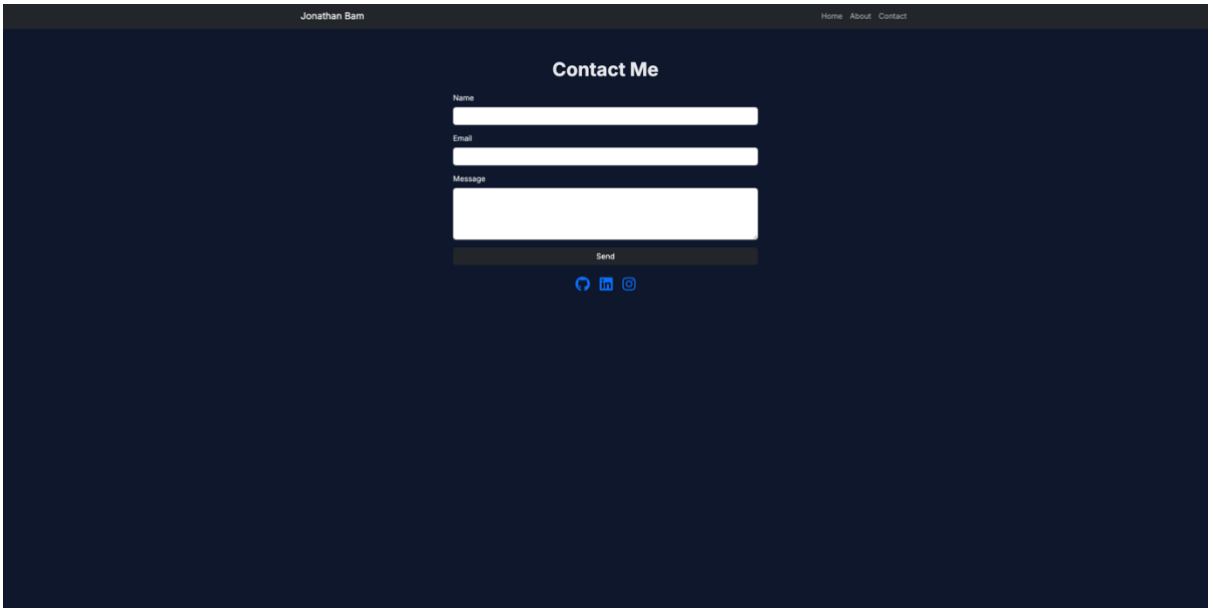
Jonathan Bam
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Name
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