


Jack E. Mossberg Portfolio Website Documentation

Jack E. Mossberg

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A large, bold, black monogram consisting of the letters 'J' and 'M' in a serif typeface. The 'J' is on the left and the 'M' is on the right, with the 'J' partially overlapping the 'M'.

**JACK
MOSSBERG**

1. Project Overview

What is the Website?

This is a personal portfolio website showcasing my (Jack E. Mossberg) skills, projects, and resume as a software developer.

Who is it for?

This website is designed for potential employers, clients, or collaborators interested in my technical expertise and professional background.

What Problem Does it Solve or Purpose Does it Serve?

The website serves as a centralized platform to show my skills as a programmer, highlight completed projects, and provide a downloadable resume, facilitating professional networking and job opportunities.

Main Features

- Biography section with personal introduction and career goals.
- Projects section displaying three programming projects.
- Skills section to show my technical proficiency.
- Resume section with an embedded PDF of my resume.
- Navigation bar with internal links to internal sections.

2. Project Milestones

- Created the project design, got said design approved, and html structure.
- Created wireframes and selected a dark-themed, minimalist design.
- Built HTML/CSS structure with responsive layouts and animations.
- Conducted device testing to ensure compatibility with varying devices.
- Deployed to github pages.

3. Project Goals

Primary Objectives

- Allow users to learn about my background, skills, and projects.
- Provide easy access to a downloadable resume.
- Ensure a seamless, visually appealing user experience across varying devices.

User Accomplishments

- Navigate through Biography, Projects, Skills, and Resume sections.
- View project details and skill proficiencies.
- Access and view the printable resume in PDF format.
- Contacts for opportunities.

4. Requirements

Functional Requirements

- Display a fixed navigation bar with links to Biography, Projects, Skills, and Resume.
- Present a biography with an image and text describing my background and goals.
- Showcase at least three projects with titles, images, and descriptions.
- List skills with corresponding icons.
- Embed a resume PDF for viewing.
- Include a footer with copyright.

Non-Functional Requirements

- Intuitive navigation and clear navigation hierarchy.
- Functional on desktops, tablets, and mobile devices.

5. Timeline

- Planning - Completed by Monday.
- Design - Completed by Wednesday
- Development - Completed by Thursday
- Tests - Completed by Thursday
- Launch - Friday

6. Resources

Tools:

- Visual Studio Code
- Github desktop / Github

Frameworks/Libraries: None (pure HTML and CSS)

Informational Resources:

- MDN Web Docs for HTML/CSS reference
- Stack Overflow for troubleshooting CSS issues

7. Website Description

Main Content

The website includes four main sections: Biography, Projects, Skills, and Resume, along with a fixed navigation bar and footer.

Structure

- Navbar - Fixed at the top with links to each section and a decorative logo.
- Biography - Contains an image of Jack and two text blocks (“Who Am I?” and “What’s Next?”).
- Projects - Displays three projects (Overdrive, Glib, Rubgld) with images and descriptions.
- Skills - Lists nine skills (Python, CSS, HTML, JavaScript, Django, Java, Spring, SQL, C/C++) with icons.
- Resume - Embeds a PDF resume.
- Copyright - Displays copyright information.

User Experience

The site features a dark theme with a minimalist design, simple hover animations, and responsive layouts for mobile and tablet devices. Navigation is intuitive via the fixed navbar, and content is organized for easy scanning.

8. Design Section

Wireframes/Mockups

Wireframes were created for desktop and mobile layouts, focusing on a fixed navbar, sectioned content, and responsive grid layouts for projects and skills. (Note: Wireframe images are not included but can be attached separately.)

Design Rationale

Color Scheme:

- Dark gray for the body background.
- Dark blue for section containers and navbar.
 - Light gray for some hover effects.
 - Text is white for high contrast.

The dark theme is minimal, reducing eye strain with the dark theme and emphasizing text content.

Layout:

Flexbox is used primarily.

Typography:

- Font: Courier New for a clean aesthetic.
- Weights: Light (100) for headings.

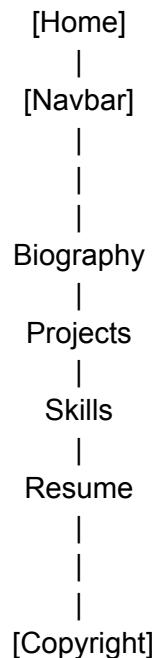
Responsiveness:

Media queries at 768px and 480px adjust font sizes, image widths, and layouts for tablets and mobile devices.

Accessibility:

High-contrast text and images with alt attributes ensure maximum usability.

Navigation/User Flow Diagram



User Flow: Users enter on the homepage (top of site), scroll to view sections, or click navbar links to jump to different sections such as the Biography, Projects, Skills, or Resume section. The fixed navbar ensures easy navigation at all times.

9. Implementation

Development Process:

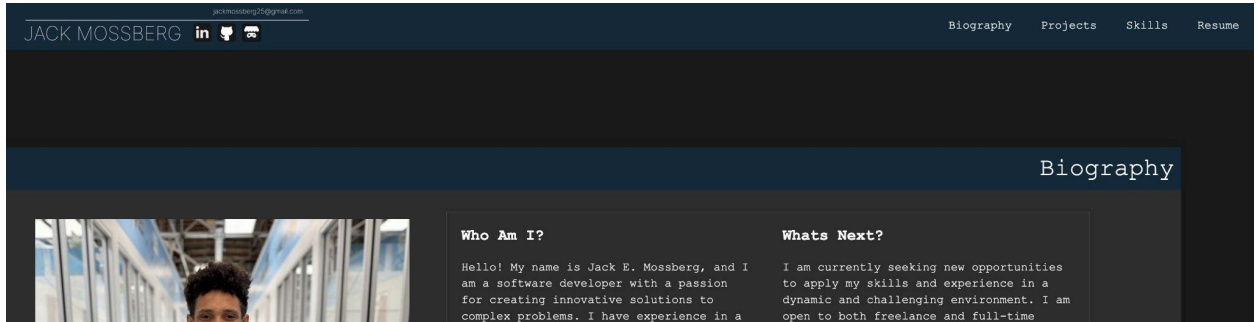
- Created HTML structure with respective sections.
- Styled with CSS using Flexbox for layout and media queries for compatibility.
- Added hover animations for interactivity.
- Embedded resume PDF and optimized images for fast loading.
- Fully implemented mobile support.

Deployed Website - GitHub Pages.

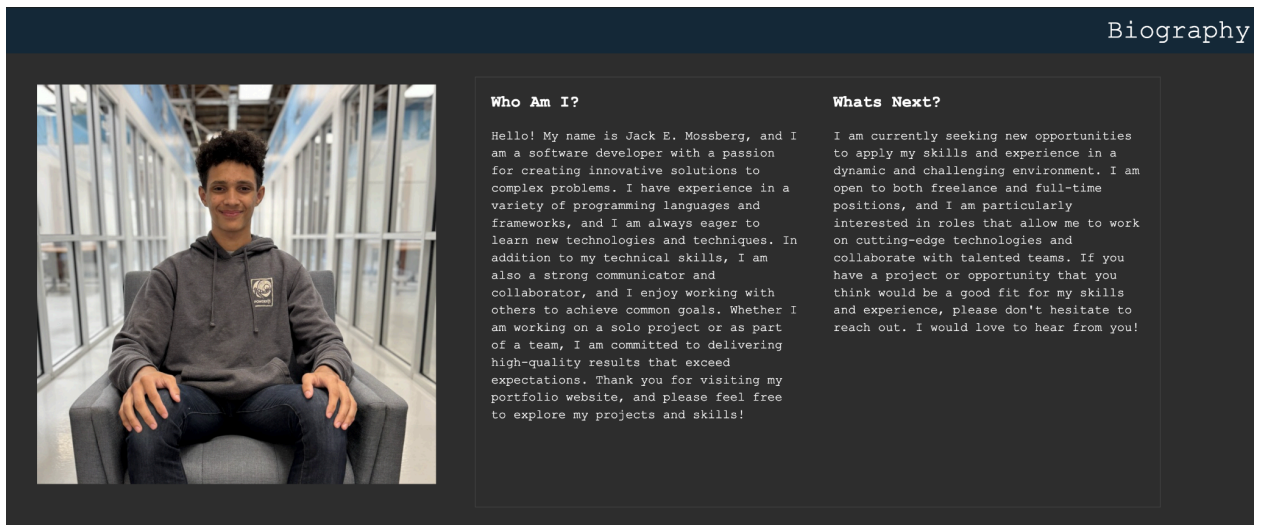
GitHub Repository - <https://github.com/jackmossberg/Portfolio-Website>.

Screenshots:

Navbar - Fixed, dark blue with white links and hover animation



Biography - Image on left, text on right (stacked for mobile).



Projects - Three cards with images and descriptions.

Projects

Overdrive [Windows/Mac]



Overdrive is a cross-platform file management application designed to enhance productivity by providing users an intuitive interface for managing folders.

Glib [Mac]



Glib is a lightweight C-based graphics library for creating stunning visualizations using the simple syntax of Python.


Rubgld [Windows]





Rubgld is a graphics library for Windows that provides advanced graphics rendering features geared towards game developers.


Skills - Grid of nine skill cards with icons.


Skills



Python



CSS



HTML



JavaScript


Django

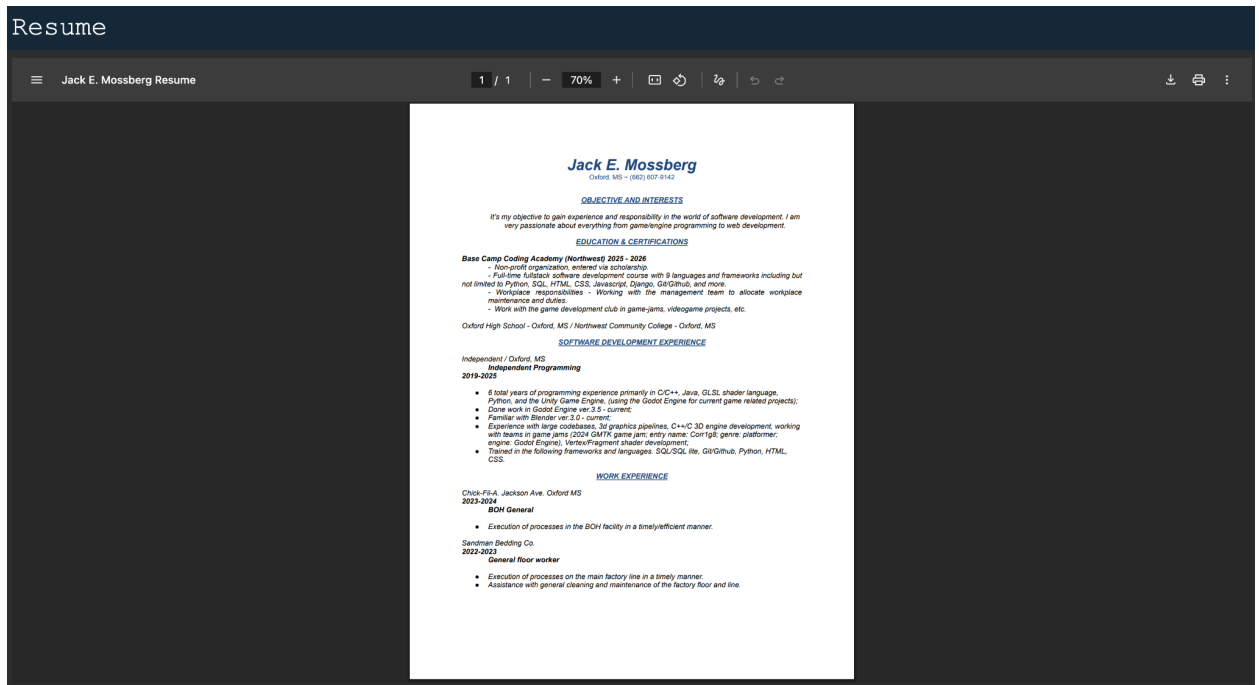

Java


Spring


SQL


C/C++

Resume - Embedded PDF viewer.



Code Snippets:

CSS keyframe animation for responsive hovering.

```
@keyframes navbar-button-animation {  
  0% {  
    color: white;  
    background-color: rgba(23, 42, 58, 1);  
  }  
  100% {  
    color: rgb(184, 184, 184);  
    background-color: rgb(19, 34, 47);  
  }  
}
```

Robust HTML structuring to reduce the amount of CSS needed for styling.

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8" />
  <meta name="viewport" content="width=device-width, initial-scale=1.0"/>
  <title>Jack E. Mossberg</title>
  <link rel="stylesheet" href="styles.css" />
</head>
<body id="body">
  <section id="navbar" class="text-element">
    <div id="navbar-container">
      <div id="navbar-left-container">
        <div id="navbar-left-contacts-container"></div>
        <div id="navbar-left-decor-container">
          
        </div>
        <div id="navbar-left-link-list-container"></div>
      </div>
      <div id="navbar-right-container">
        <ul id="navbar-nav-list">
          <li class="navbar-nav-list-element">
            <a class="internal-link" href="#About Me">Biography</a>
          </li>
          <li class="navbar-nav-list-element">
            <a class="internal-link" href="#Projects">Projects</a>
          </li>
          <li class="navbar-nav-list-element">
            <a class="internal-link" href="#Skills">Skills</a>
          </li>
          <li class="navbar-nav-list-element">
            <a class="internal-link" href="#Resume">Resume</a>
          </li>
        </ul>
      </div>
    </div>
  </section>
```

```
<div id="main-contents">
  <section id="About Me" class="text-element">
    <div id="About-Me-container">
      <h5 id="About-Me-title">Biography</h5>
      <div id="About-Me-bg-container">
        <div id="About-Me-left-container">
          <div id="About-Me-image-container">
            
          </div>
        </div>
      </div>
      <div id="About-Me-right-container">
        <div class="Who-Am-I-text-container">
          <h1 id="About-Me-header">Who Am I?</h1>
          <p id="About-Me-text">
            Hello! My name is Jack E. Mossberg, and I am a software
            developer with a passion for creating innovative solutions to
            complex problems. I have experience in a variety of programming
            languages and frameworks, and I am always eager to learn new
            technologies and techniques. In addition to my technical skills,
            I am also a strong communicator and collaborator, and I enjoy
            working with others to achieve common goals. Whether I am
            working on a solo project or as part of a team, I am committed
            to delivering high-quality results that exceed expectations.
            Thank you for visiting my portfolio website, and please feel
            free to explore my projects and skills!
          </p>
        </div>
      </div>
      <div class="Who-Am-I-text-container">
        <h1 id="About-Me-header">Whats Next?</h1>
        <p id="About-Me-text">
          I am currently seeking new opportunities to apply my skills and
          experience in a dynamic and challenging environment. I am open
          to both freelance and full-time positions, and I am
          particularly interested in roles that allow me to work on
          cutting-edge technologies and collaborate with talented teams.
          If you have a project or opportunity that you think would be a
          good fit for my skills and experience, please don't hesitate to
          reach out. I would love to hear from you!
        </p>
      </div>
    </div>
  </section>
</div>
```

```

        </p>
    </div>
</div>
</div>
</div>
</section>

<section id="Projects" class="text-element">
    <div id="Projects-container">
        <h5 id="Projects-title">Projects</h5>
        <div id="About-Me-bg-container">
            <div id="projects-list-container">
                <div class="project-element">
                    <h1 class="project-title">Overdrive [Windows/Mac]</h1>
                    
                    <p class="project-description">Overdrive is a cross-platform file
management application designed to enhance productivity by providing users an
intuitive interface for managing folders.</p>
                </div>
                <div class="project-element">
                    <h1 class="project-title">Glib [Mac]</h1>
                    
                    <p class="project-description">Glib is a lightweight C-based graphics
library for creating stunning visualizations using the simple syntax of Python.</p>
                </div>
                <div class="project-element">
                    <h1 class="project-title">Rubgld [Windows]</h1>
                    
                    <p class="project-description">Rubgld is a graphics library for Windows
that provides advanced graphics rendering features geared towards game developers.</p>
                </div>
            </div>
        </div>
    </div>
</section>

<section id="Skills" class="text-element">
    <div id="Skills-container">
        <h5 id="Skills-title">Skills</h5>
        <div id="Skills-bg-container">
            <div class="skill-element">

```

```
        
        <h4 class="skill-title">Python</h4>
    </div>
    <div class="skill-element">
        
        <h4 class="skill-title">CSS</h4>
    </div>
    <div class="skill-element">
        
        <h4 class="skill-title">HTML</h4>
    </div>
    <div class="skill-element">
        
        <h4 class="skill-title">JavaScript</h4>
    </div>
    <div class="skill-element">
        
        <h4 class="skill-title">Django</h4>
    </div>
    <div class="skill-element">
        
        <h4 class="skill-title">Java</h4>
    </div>
    <div class="skill-element">
        
        <h4 class="skill-title">Spring</h4>
    </div>
    <div class="skill-element">
        
        <h4 class="skill-title">SQL</h4>
    </div>
    <div class="skill-element">
        
```

```

        <h4 class="skill-title">C/C++</h4>
      </div>
    </div>
  </div>
</section>

<section id="Resume" class="text-element">
  <div id="Resume-container">
    <h5 id="Resume-title">Resume</h5>
    <div id="About-Me-bg-container">
      <div id="Resume-pdf-container">
        <embed
          src="documents/Jack-E.-Mossberg-Resume.pdf"
          type="application/pdf"
          width="100%"
          height="1230px"
        />
      </div>
    </div>
  </div>
</section>

<footer id="footer" class="text-element">
  <div id="footer-container">
    <p id="copyright-text">© 2025 Jack E. Mossberg. All rights reserved.</p>
  </div>
</footer>
</div>
</body>
</html>

```

10. Testing

Testing Process:

- Manual Testing - Tested on Chrome and Safari across desktop, tablet (768px), and mobile (480px) breakpoints.

Test Cases:

- Navbar links correctly navigate to sections.
- Images load without errors and have alt text.
- Resume PDF embeds and displays correctly.
- Responsive layouts adjust at 768px and 480px breakpoints.
- Hover animations trigger smoothly.

Bugs Found/Fixed:

- Bug - On mobile (480px), the navbar logo was too large. Fix: Reduced size to max-width: 60vw.
- Bug - Project cards overlapped on tablets. Fix: Adjusted projects-list-container to flex-direction: column at 768px.

11. Maintenance Plan

- Bug Fixes: smooth scaling issues.
- WebGL (JS) implementation.

12. Reflection

What I Learned:

- Mastered Flexbox for responsive layouts.
- Improved understanding of CSS animations and media queries.
- Gained experience embedding PDFs and optimizing related images.

Challenges Faced:

- Ensuring consistent responsive design across devices.
- Debugging overlapping elements in the Projects section.

What Went Well:

- Achieved a clean, professional design.
- Navbar animation added an engaging feel.

What I Would Do Differently:

- Restricted or no use of figma.
- Allocate more time to early HTML structuring.

13. Glossary/Dictionary

- Flexbox - A CSS layout model for arranging elements in rows or columns, used for responsive design.
- Media Query - A CSS technique to apply styles based on device characteristics (e.g., screen width).
- WCAG - Web Content Accessibility Guidelines, standards for making web content accessible.
- PDF Embed - HTML technique to display a PDF file within a webpage using the <embed> tag.
- Hover Animation - CSS effect that changes an element's style (e.g., color) when a user hovers over it.