



CS5709 - SOFTWARE ENGINEERING EVOLUTION
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Department of SOFTWARE ENGINEERING

Module: CS5709 - SOFTWARE ENGINEERING
EVOLUTION 2025/6 SEM1

Assignment 5: Technical Report

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1. Overview

This updated technical report presents the final and enhanced version of the digital portfolio website developed as part of the CS5709 – Software Engineering Evolution module. While the initial submission fulfilled the core academic requirements, this updated version documents significant post-submission enhancements, architectural refinements, and professional extensions that demonstrate software evolution in practice.

The project now represents a production-quality, publicly deployed system, rather than a purely academic artefact. In line with software evolution principles, the system has undergone iterative improvement in terms of interactivity, usability, deployment strategy, documentation, and operational readiness.

2. Deployment Strategy and Professional Hosting

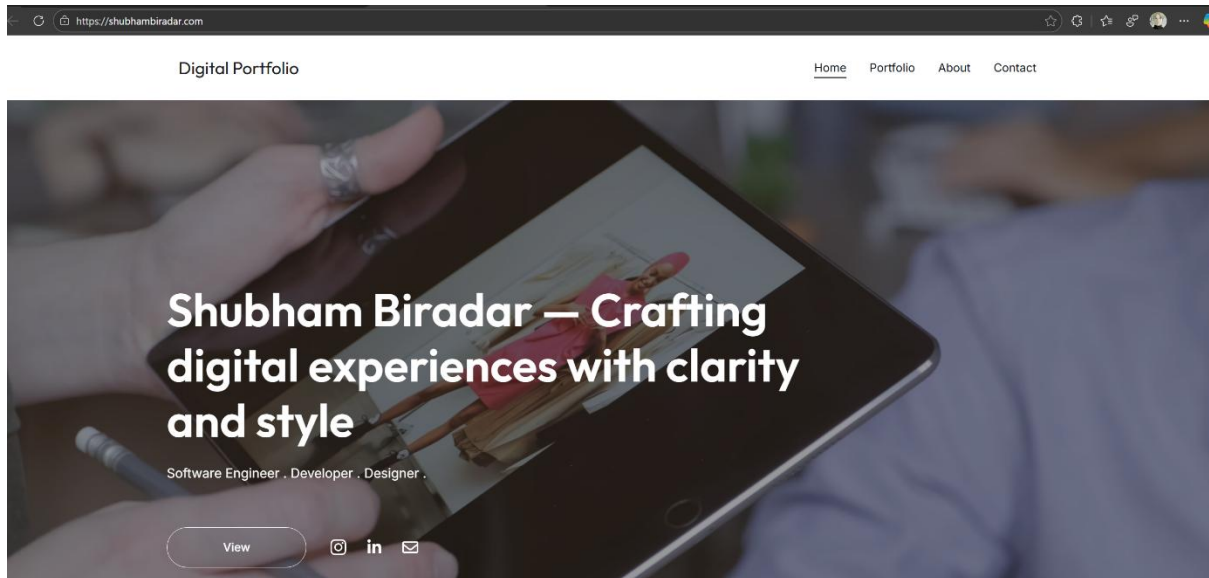
2.1 Evaluation of My Personal Performance

Unlike the minimum requirement suggested in the module guidelines (static publishing via GitHub Pages), the portfolio has been deployed using a custom domain:

[Project Link](https://shubhambiradar.com/) <https://shubhambiradar.com/>

The decision to acquire and configure a personal domain demonstrates real-world software engineering practice, including DNS

configuration, HTTPS enforcement, and long-term maintainability considerations. This step moves the project beyond a temporary academic submission and into a sustainable, professional online presence.



2.2 HTTPS, Security Certificates, and Modern Web Standards

The website is fully deployed over HTTPS, using modern TLS security certificates. All traffic is encrypted, ensuring confidentiality and integrity of user interactions. This aligns with contemporary web security best practices and reflects awareness of secure software delivery.

The website is accessible exclusively via the latest secure HTTPS protocol, reinforcing professional deployment standards expected in production environments.

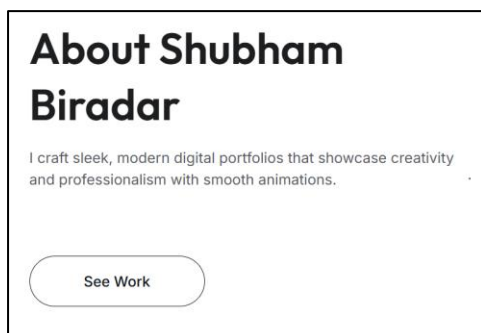
3. Interactive Features and User Experience Enhancements

3.1 Rich Interaction and Dynamic Content

The portfolio includes several interactive and dynamic elements that significantly enhance user engagement:

- Slide and glide animations for smooth navigation and transitions
- Live animated GIFs integrated into the UI
- Interactive project sections showcasing academic and technical work
- Dynamic experience and work-highlight sections
- Multiple “Get in Touch” and contact entry points across the site

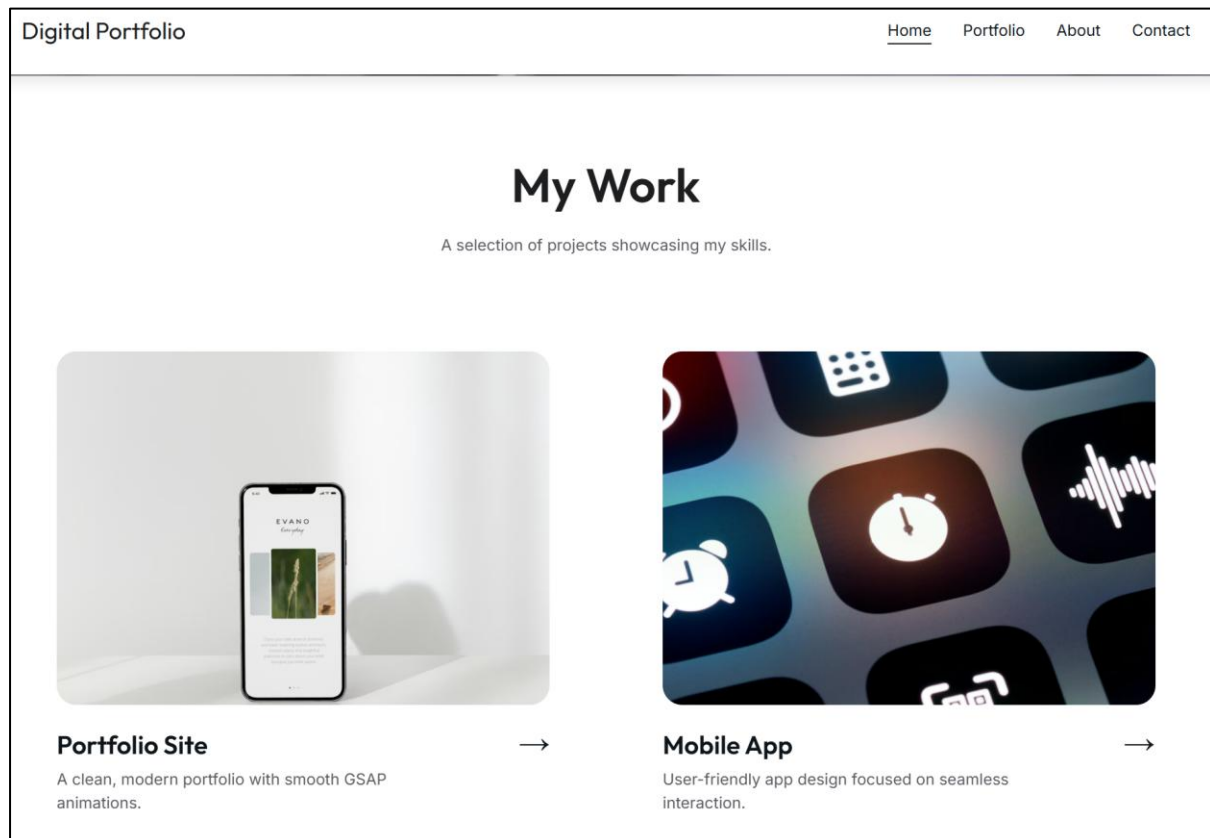
These features were intentionally designed to be subtle and professionally minimalistic, avoiding excessive visual noise while maintaining a modern and engaging user experience.



3.2 Visual Media and Content Presentation

The website integrates multiple high-quality images, project visuals, and structured content sections. Media assets are optimised and

placed to support storytelling rather than distraction, reinforcing clarity and professionalism.



4. Communication and Connectivity Features

4.1 Integrated Email Connectivity

A key enhancement beyond the original scope is direct email connectivity. Visitors can contact the author directly through the portfolio website, allowing messages to be sent without leaving the site.

This feature transforms the portfolio from a static showcase into an interactive communication platform, aligning with real-world professional expectations.

Get in Touch


Questions or ideas? I'd love to hear from you.

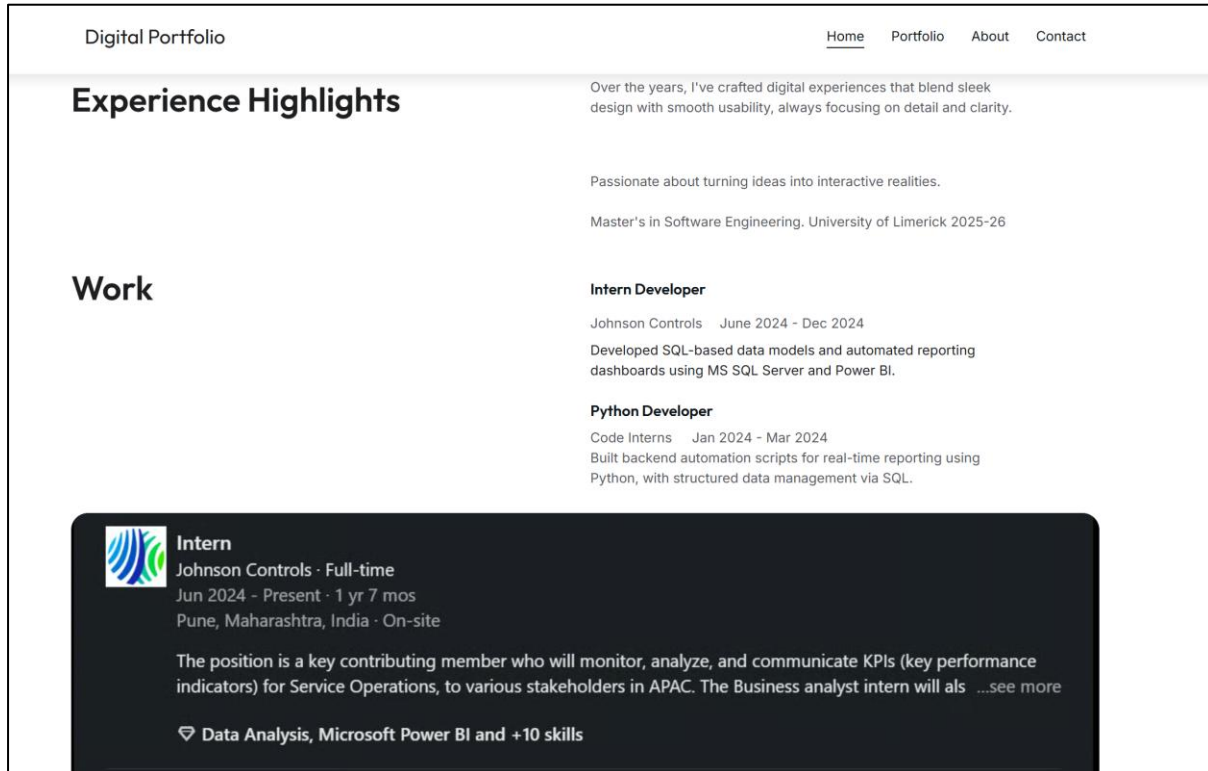
Your Name

Your Email*

Message*

Send Message





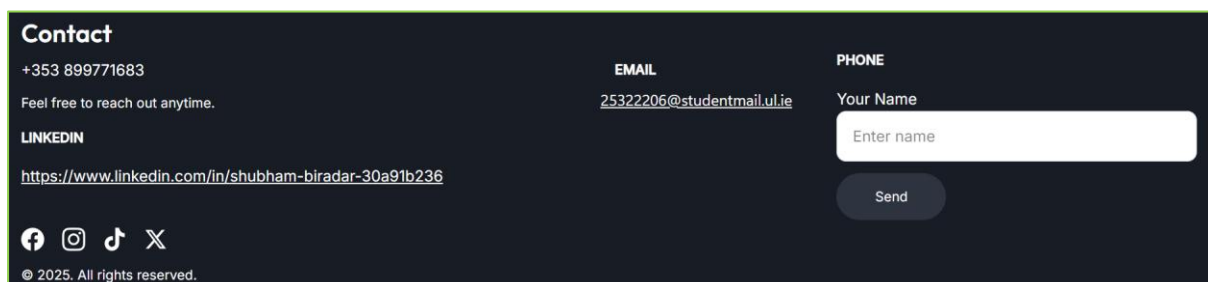
The screenshot shows a digital portfolio website with a dark theme. The header includes the title "Digital Portfolio" and navigation links: Home, Portfolio, About, and Contact. The main content area is divided into two columns. The left column features a section titled "Experience Highlights" followed by a "Work" section. The right column contains a paragraph about digital experiences, a quote about turning ideas into realities, and a mention of a Master's in Software Engineering from the University of Limerick (2025-26). Below the "Work" section, there are two job entries: "Intern Developer" at Johnson Controls (June 2024 - Dec 2024) and "Python Developer" at Code Interns (Jan 2024 - Mar 2024). A large dark card at the bottom highlights an "Intern" role at Johnson Controls, detailing the position as a key contributing member for Service Operations and listing skills like Data Analysis and Microsoft Power BI.

4.2 External Professional Links

The portfolio integrates direct access to:

- LinkedIn profile
- Professional email contact

These integrations strengthen professional visibility and networking capability while maintaining privacy and controlled access.

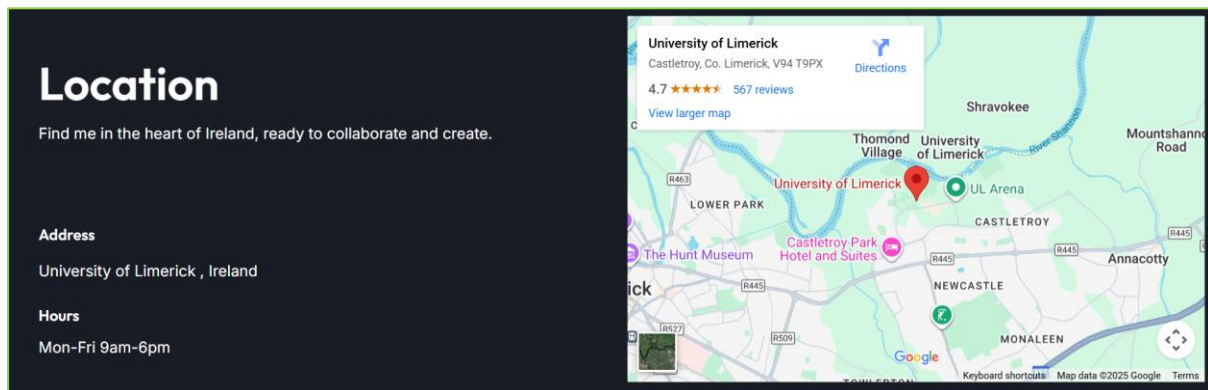


The screenshot shows a contact section with a dark background. It includes a "Contact" heading, a phone number (+353 899771683), and a message encouraging users to reach out. Below this is a "LINKEDIN" section with a URL. To the right, there is an "EMAIL" field with the address 25322206@studentmail.ul.ie and a "PHONE" section with a form labeled "Your Name" and a "Send" button. At the bottom, there are social media icons for Facebook, Instagram, TikTok, and X, along with a copyright notice for 2025.

5. Location Awareness and Interactive Mapping

The website includes a professionally embedded, interactive Google Maps component, showcasing the author's academic location at the University of Limerick.

This feature enhances authenticity, contextual grounding, and professionalism, while demonstrating integration of third-party services within a modern web application.



6. Search Engine Optimisation (SEO) and Analytics Considerations

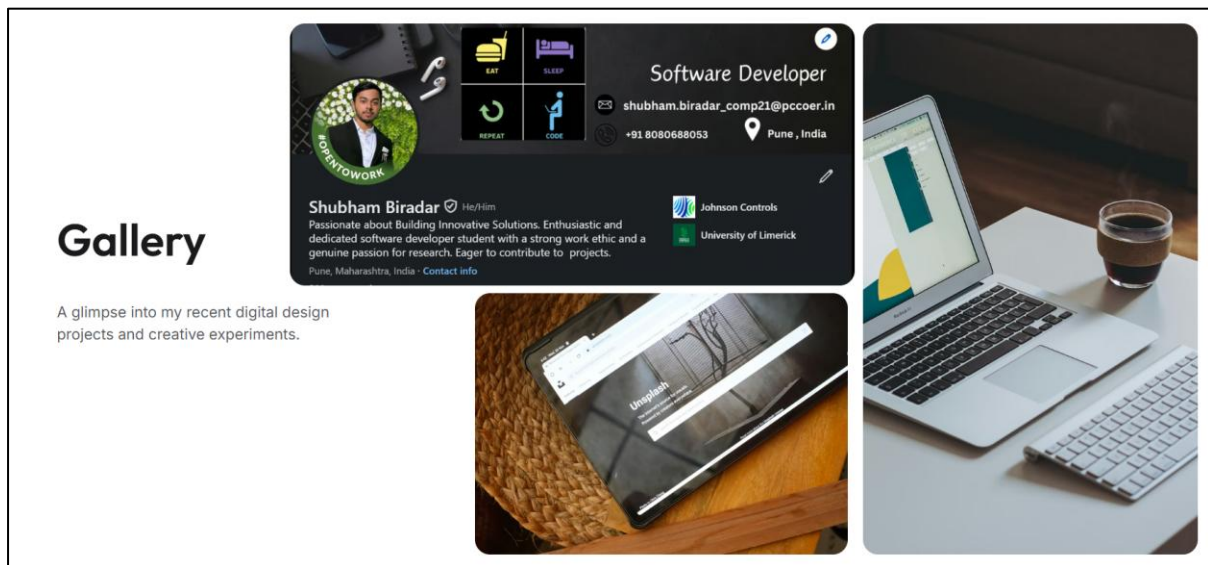
6.1 SEO and Keyword Refinement

SEO principles were actively considered during development, including:

- Keyword refinement in headings and metadata

- Semantic HTML structure
- Performance-conscious asset loading

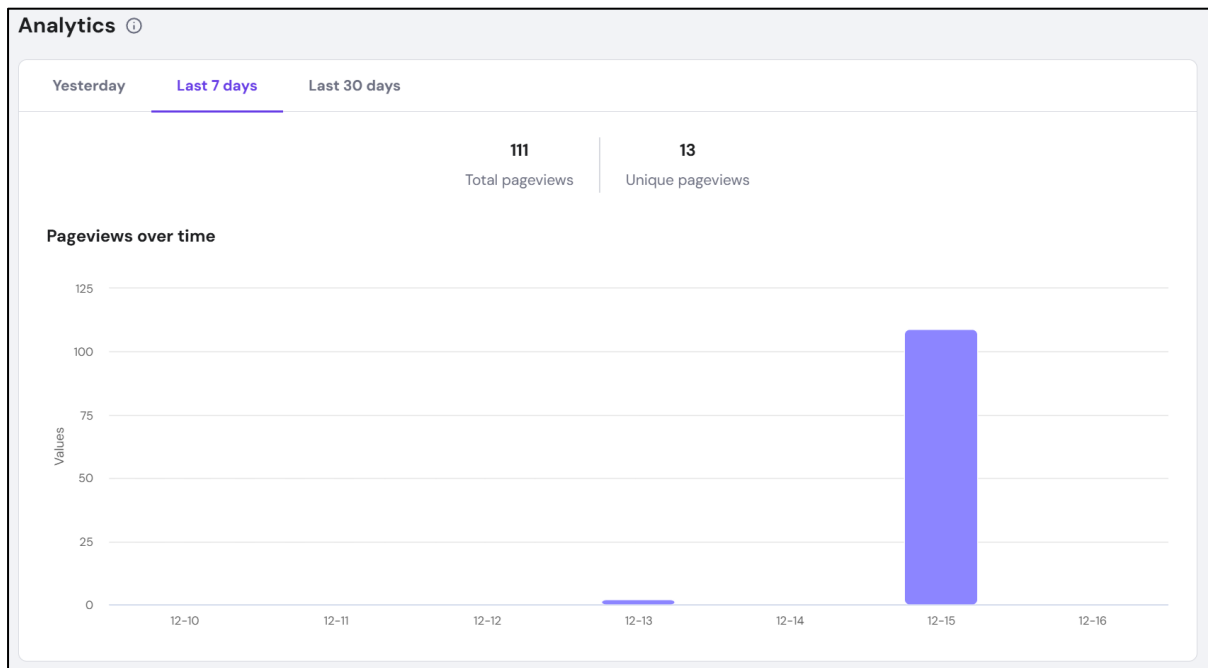
These practices improve discoverability and ensure that the website follows modern visibility standards rather than functioning as an isolated academic artefact.



6.2 Analytics Awareness

The system architecture and deployment approach account for future analytics integration. This demonstrates foresight into monitoring, usage evaluation, and iterative improvement—core concepts in

software evolution.

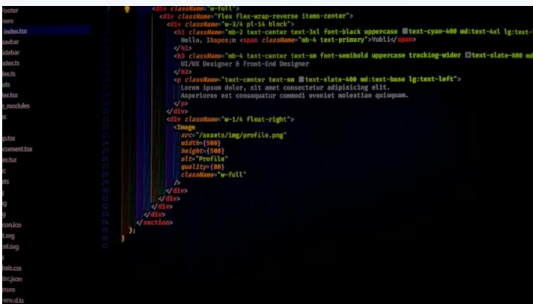


What I Do

Crafting sleek, minimal digital portfolios that highlight your unique story.

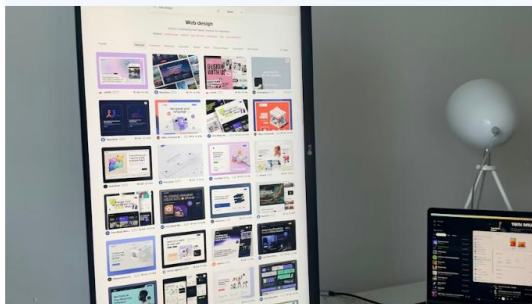
Development

Building responsive, professional websites with seamless user experience.



Design

Creating clean, modern layouts with smooth animations to engage visitors.



7. Alignment with Software Engineering Evolution Principles

The final version of the portfolio strongly reflects the principles taught in CS5709:

- **Iterative refinement** rather than one-time delivery
- **Evolutionary design**, adapting architecture and content over time
- **Documentation-aware development**, supported by structured reporting
- **Deployment realism**, including domain ownership and HTTPS security
- **User-centric evolution**, incorporating interaction and accessibility

The enhancements demonstrate that software evolution is not limited to code changes but includes deployment strategy, usability, communication, and long-term sustainability.

8. Reflection on Going Beyond the Defined Scope

While the module guidelines suggested basic hosting through GitHub, this project deliberately exceeded the minimum scope by:

- Acquiring and configuring a custom domain
- Deploying a secure HTTPS production site
- Integrating email communication and interactive maps
- Enhancing interactivity with animations and dynamic media
- Considering SEO, analytics, and long-term maintainability

These decisions reflect professional initiative, independent learning, and a strong understanding of real-world software engineering practice.

9. Summary

This updated technical report documents the final evolution of the digital portfolio website into a **fully deployed, interactive, secure, and professional system**. The project demonstrates clear alignment with software evolution theory and practice, while showcasing initiative beyond academic requirements.

The final outcome represents not only a successful module deliverable but a sustainable professional asset capable of continued evolution.