

GIAIC HACKATHON 3 DAY 6

Day 6 - Deployment Preparation and Staging Environment Setup

Objective:

Day 6 was dedicated to deploying the marketplace project by ensuring its readiness for production. This phase involved conducting thorough testing, and creating professional deployment documentation to ensure a seamless user experience.

Key Learning Outcomes

1. Deployment Setup:

- **Hosting Platform Selection:** Chose Vercel for its robust features and efficient deployment capabilities.
- **GitHub Integration:** Connected the project's GitHub repository to the hosting platform, streamlining the deployment process.
- **Configuration:** Configured build settings, environment variables, and secure API keys on the hosting platform.
- **Setting up environment variables:** set projectId , dataset and API-token in Vercel enviroment variable for security purpose.
- **Validation:** Deployed the application to production setup.

2. Comprehensive Testing

- **Functional Testing:** Used Cypress to validate workflows and Postman to test API responses. Verified user interactions like cart management and search functionality.
- **Performance Testing:** Assessed page load times, responsiveness, and speed using Lighthouse and GTmetrix.
- **Security Testing:** Conducted input validation, enforced HTTPS, and safeguarded API keys against unauthorized access.
- **Cross-Device Compatibility:** Tested the application across multiple devices and browsers to ensure consistency and responsiveness.
- **Error Handling:** Evaluated the system's ability to gracefully handle errors and provide meaningful feedback to users.

Deployment Strategy

Hosting and Backend Integration

- Ensured smooth interaction between the frontend and backend services, including Sanity CMS and third-party APIs.
- Configured environment variables securely to maintain data integrity and privacy.

Staging Environment

- Deployed the project to a staging environment for pre-production testing.
- Validated that builds were successful and that all features functioned as expected.

Testing Tools

- Postman: For validating API responses.
 - Lighthouse: To analyze performance metrics.
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Conclusion

Day 6 concluded with the successful deployment of the marketplace project to a staging environment. By following industry-standard practices, the project is now equipped for a seamless transition to production. Comprehensive testing ensured that the platform is secure, scalable, and provides an exceptional user experience. The documentation and organized repository structure serve as a robust foundation for future enhancements.