

Deployment Strategy Plan for Next.js eCommerce Website

1. Setting Up the Deployment Process

- **Version Control with GitHub:**
 - Ensure your project is fully version-controlled using GitHub.
 - Create a repository for the project and push your codebase to GitHub.
 - Use branches (e.g., `main`, `development`, or feature branches) to manage changes effectively.



Integrating with Vercel:

- Connect your GitHub repository to Vercel.
- Enable automatic deployment, so any changes pushed to the `main` branch trigger a new deployment.

Vercel Features and Benefits

Automatic Builds:

- Vercel automatically detects your Next.js configuration and builds the website without manual setup.
- Built-in optimizations for Next.js, such as server-side rendering (SSR) and static site generation (SSG).

Custom Domains:

- Easily link custom domains to your eCommerce site.

- Vercel provides free SSL certificates for secure browsing.

Serverless Functions:

- Deploy API routes and serverless functions directly using Vercel.
- Great for handling eCommerce-specific functionalities like payment processing or user authentication.

Performance Insights:

- Vercel provides analytics on website performance, including load time and Core Web Vitals.

Global CDN:

- Content is automatically distributed via a global Content Delivery Network (CDN) for fast load times worldwide.

- **Environmental Variable Configuration**
- Environment variables are used to securely store sensitive information such as API keys, database URLs, and other configurations that should not be exposed in your codebase. Vercel provides a secure way to manage and use these variables in your Next.js application.

General
Domains
Environment Variables
Git
Integrations
Deployment Protection
Functions
Data Cache
Cron Jobs
Log Drains
Security
Advanced

<>	NEXT_PUBLIC_BASE_URL All Environments	⦿	Added 2h ago		...
<>	SHIPENGINE_THIRD_COURIER All Environments	⦿	Added 7h ago		...
<>	SHIPENGINE_SECOND_COURIER All Environments	⦿	Added 7h ago		...
<>	SHIPENGINE_FIRST_COURIER All Environments	⦿	Added 7h ago		...
<>	SHIPENGINE_API_KEY All Environments	⦿	Added 7h ago		...
<>	SANITY_API_TOKEN All Environments	⦿	Added 7h ago		...
<>	NEXT_PUBLIC_SANITY_DATASET All Environments	⦿	Added 7h ago		...

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- **Setting Up a Staging Environment on Vercel**
- A staging environment is a replica of your production environment used for testing new features, bug fixes, and updates before deploying them live. Here's how to set up a staging environment on Vercel:

Benefits of a Staging Environment

- **Safe Testing:** Test new features, updates, or bug fixes without affecting the live site.
- **Replicates Production:** Simulates real-world behavior by mimicking the production environment.
- **Identifies Issues Early:** Detects bugs, UI issues, or performance problems before they reach end-users.

Testing on Staging:

- Access the staging environment via the Vercel-generated URL.
- Test all new features, integrations, and bug fixes thoroughly.
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The screenshot shows the Vercel deployment interface for a project named 'giaic-figma-hackathon'. At the top, there are navigation links: 'Repository', 'Usage', 'Domains', and a 'Visit' button with a dropdown arrow. Below this, the 'Production Deployment' section is active, showing a preview of the deployed application. The preview is a yellow page with a navigation bar containing 'Home', 'Shop', 'Products', 'Account', and 'Contact'. The main content area features the text 'Rocket single seater' and a 'Shop Now' link. To the right of the preview, deployment details are listed: the deployment name 'giaic-figma-hackathon-fhgtsv387-asia-parveens-projects.vercel.app', the domain 'giaic-figma-hackathon.vercel.app', and the status 'Ready' (indicated by a green dot) with a timestamp '1h ago by Asia-parveen'. The source is identified as 'master' with a commit hash '0f9e540' and the message 'Update README.md'. At the top right of the deployment details, there are buttons for 'Build Logs', 'Runtime Logs', and 'Instant Rollback'.

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CheckList for Day 6:

Deployment Preparation: Done

Staging Environment: Done

Documentation: Done

Form Submission: Done

Final Review: Done

Conclusion:

On Day 6 of the hackathon, the focus was on deployment and ensuring the application was production-ready. The deployment process involved setting up environment variables to securely manage sensitive information such as API keys and database URLs. By leveraging Vercel's capabilities, the application was deployed efficiently, allowing us to benefit from features like automatic builds, global CDN, and preview deployments.

Post-deployment, we thoroughly checked the website's efficiency, including performance, responsiveness, and functionality, to ensure a smooth user experience. The task emphasized the importance of a well-configured deployment process and proper environment management, which are crucial for delivering a robust and secure web application.