DAY:5 Testing And Backened Refinement:

97 Performance · 83 Accessibility · 78 Best Practices · 100 SEO
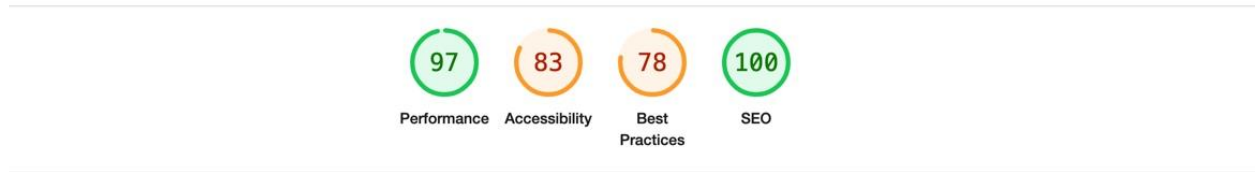
Performance

Values are estimated and may vary. The performance score is calculated directly from these metrics. See calculator.

Key Performance Metrics

- **First Contentful Paint (FCP): 0.3s**
- **Largest Contentful Paint (LCP): 0.7s**
- **Total Blocking Time (TBT): 140ms**
- **Cumulative Layout Shift (CLS): 0** (Optimal)
- **Speed Index (SI): 0.3s**

Key Observations and Areas for Improvement

Performance:

- **Strengths**:
  - Excellent scores in FCP, LCP, and Speed Index, ensuring fast load times.
  - No cumulative layout shift (CLS), offering a stable visual experience.
- **Improvements Needed**:
  - **Render-blocking resources**: Potential savings of **60ms** by optimizing resource loading.
  - **Image Optimization**: Size and load images properly to reduce unused resources (potential savings of **907 KiB**).
  - **Unused JavaScript**: Reduce unused JavaScript to save **32 KiB** and minimize JavaScript execution time.

Accessibility:

- **Strengths**:
  - The website passes a significant number of accessibility audits.
- **Improvements Needed**:
  - **Buttons and Links**: These elements lack accessible names, which could impact users relying on screen readers.
  - **Contrast**: Some background and foreground colors do not meet accessibility contrast requirements.

- - **Heading Structure**: Headings are not in a sequentially-descending order, which can hinder keyboard navigation.

Best Practices:

- **Strengths**:
  - The site passes basic best practices audits, ensuring some security standards are met.
- **Improvements Needed**:
  - **Third-Party Cookies**: Five third-party cookies detected. Reducing reliance on these cookies can improve privacy and performance.
  - **Missing Source Maps**: Missing source maps for large JavaScript files, which can affect debugging.
  - **Content Security Policy (CSP)**: Ensure CSP is configured to defend against cross-site scripting (XSS) attacks.

SEO:

- **Strengths**:
  - The site achieved a perfect SEO score, indicating strong foundational SEO practices.
  - Structured data is valid, helping search engines better understand the content.
- **Improvements Needed**:
  - Perform additional SEO validation beyond Lighthouse to ensure the site is fully optimized for search engines.

Recommendations

1. **Performance**:
   a. Optimize images to reduce loading times and improve the overall performance.
   b. Minimize unused JavaScript and eliminate render-blocking resources.
2. **Accessibility**:
   a. Ensure all interactive elements like buttons and links have accessible names for screen readers.
   b. Adjust color contrast to meet accessibility standards.

c. Organize heading elements in a descending order to improve keyboard
            navigation.
    3. **Best Practices**:
        a. Resolve issues related to third-party cookies and JavaScript source maps.
        b. Strengthen security by implementing an effective CSP to prevent XSS
            vulnerabilities.
    4. **SEO**:
        a. Conduct further SEO reviews and make adjustments as needed to enhance
            rankings.

This concise report highlights the website's strengths and provides actionable suggestions
to improve its performance, accessibility, and SEO. Please consider these
recommendations for enhancing the overall quality and user experience of the website.

Test No.	Feature	Test it	Expected Outcome	Actual Outcome	Status	Priority	Note
T001	Performance Benchmark	Test performance metrics (FCP, LCP, TBT)	FCP: < 1s, LCP: < 2.5s, TBT: < 150ms	FCP: 0.3s, LCP: 0.7s, TBT: 140ms	Passed	High	Performance benchmarks met
T002	Navigation Consistency	Test page navigation and routing	Pages should navigate without issues	Navigation works as expected	Passed	High	No navigation issues found
T003	Dynamic Working Cart Functionality	Test functionality of dynamic carts	Carts should update dynamically based on interactions	Carts load and update dynamically	Passed	High	Cart functionality works
T004	Login/Sign Up	Test login and sign-up functionality	Users should be able to log in/sign up without errors	works correctly	Passed	High	Login/sign up are functional
T005	Accessibility	Test accessibility (contrast, labels)	T ext should have sufficient contrast, buttons should be labeled correctly	Contrast is insufficient in some areas, some buttons unlabeled	Failed	High	Improve contrast, add labels to buttons
T006	SEO Optimization	Test SEO structure (meta tags, headings)	SEO meta tags and headings should be correct	Meta tags are properly implemented, headings in place	Passed	Medium	SEO tags are fine, no issues

T007	Product Visibility	Test image visibility and loading	Images should load quickly and be visible on all devices	Some images are slow to load	Failed	Low	Improve image load speed
T008	Performance Benchmark	Test for performance improvements after optimizations	Minimize unused JS, reduce render-blocking resources	Some unused JS detected, image optimization needed	Failed	Medium	Further optimizatio n required

Focus on Testing and Optimization for Marketplace Launch

This phase primarily concentrated on testing and optimizing the marketplace in preparation for its launch. Significant progress was made in refining the user interface, ensuring system performance, and securing the overall functionality. Key achievements include enhancing performance metrics and addressing potential issues to ensure a seamless and efficient user experience.