

Performance Test Report - User 1: Margaret (Herman's sister)

Test Environment

- Date: April 12, 2025
- Tester: Margaret
- Browser: Safari 17.4
- Device/OS: MacBook Air / macOS 14.3
- Network Condition: Wi-Fi (75 Mbps)

Page Load Times

Page	First Load (sec)	Cached Load (sec)	Comments
Home	2.7	0.8	Images load smoothly
Map	3.3	1.1	Map initialization takes time
About	1.8	0.6	Clean and fast
FAQ	1.5	0.5	Very responsive
Contact	1.7	0.6	Forms load quickly
Login	1.6	0.5	Quick authentication

API Performance

API Endpoint	Response Time (ms)	Success Rate (%)	Comments
/api/bikesInfo	230	100	Reliable response
/api/weather	350	99	External API dependency
/api/stations/{id}	190	100	Fast station data
/api/contact_for m	200	100	Form submission works well

Map Performance

- Time to load map: 1.9 seconds
- Time to load all station markers: 1.2 seconds
- Smoothness of map interactions (1-5): 4
- Comments: Map interactions are smooth, minor lag when zooming quickly

Resource Utilization

- Peak Memory Usage: 380 MB
- CPU Utilization: 22%
- Network Requests Count: 39
- Total Page Size: 2.9 MB

Mobile Performance

- Page Speed Score: 85/100
- First Contentful Paint: 1.8s
- Time to Interactive: 3.0s
- Comments: Safari on macOS handles the site efficiently

Identified Bottlenecks

1. Initial map loading makes several API calls that could be combined
2. Some larger images could be further optimized
3. Weather API occasionally adds slight delay

Recommendations

1. Implement image compression for faster loading
2. Consider client-side caching of station data
3. Add loading indicators for map initialization

Additional Notes

The application performs well on macOS Safari. The visual transitions are smooth and the overall experience is pleasant. Map is the heaviest component but still performs within acceptable parameters.

UI Test Checklist - User 2: Sofia (classmate)

Test Environment

- Device: Samsung Galaxy S22 / Dell XPS 13
- OS: Android 13 / Windows 11

Responsive Design Testing

Test the website on the following screen sizes and mark as Pass/Fail:

- ☒ Desktop (1920x1080) - PASS
- ☒ Laptop (1366x768) - PASS
- ☒ Tablet Landscape (1024x768) - PASS
- ☒ Tablet Portrait (768x1024) - PASS
- ☒ Mobile Large (414x896) - PASS
- ☒ Mobile Small (375x667) - PASS with minor issues

Cross-Browser Testing

Test the website on the following browsers and mark as Pass/Fail:

- ☒ Chrome (latest) - PASS
- ☒ Firefox (latest) - PASS
- ☐ Safari (latest) - Not tested
- ☒ Edge (latest) - PASS
- ☒ Mobile Chrome - PASS
- ☐ Mobile Safari - Not tested

Component Testing

Header

- ☒ Logo is visible and links to home page
- ☒ Navigation links work correctly
- ☒ Login/Logout button displays properly based on session state
- ☒ Responsive menu appears on mobile devices

Map

- ☒ Map loads correctly
- ☒ Bike station markers are displayed

- [x] Clicking markers shows station information
- [x] Map controls work properly (zoom, pan)
- [x] Map is responsive to different screen sizes

Weather Display

- [x] Current weather is displayed
- [x] Weather icon matches weather condition
- [x] Temperature is displayed in Celsius
- [x] Additional weather information is readable

Station Information

- [x] Available bikes count is accurate
- [x] Available stands count is accurate
- [x] Last update time is displayed
- [x] Charts/graphs are properly scaled and labeled

Forms

- [x] Contact form has all required fields
- [x] Form validation works properly
- [x] Submission feedback is clear
- [x] Login form functions correctly

Accessibility Testing

- [x] All images have alt text
- [x] Color contrast meets WCAG AA standards
- [x] Keyboard navigation works for all interactive elements
- [] Screen reader compatibility (sample test with VoiceOver/NVDA) - FAIL (map elements)
- [x] Text resizing does not break layout

Visual Design Consistency

- [x] Color scheme is consistent across pages
- [x] Typography is consistent
- [x] Spacing and alignment is consistent
- [x] Icons and graphics are consistent in style

Notes

Record any issues or inconsistencies here:

1. On smallest mobile screens, the footer buttons are slightly cramped

2. Map markers could have better contrast in dark mode on Android
3. Screen readers struggle with map interactions and station information
4. Switching between portrait and landscape mode on mobile sometimes requires page refresh for optimal layout

Screenshots

Attached separately.

Usability Test Form - User 3: Rose (Tan's wife)

Tester Information

- Name: Rose
- Date: April 11, 2025
- Experience level (beginner/intermediate/expert): Beginner
- Device/OS: Asus laptop / Windows 11
- Browser: Edge

Tasks

Please attempt the following tasks and rate their ease of completion on a scale of 1-5 (1 = very difficult, 5 = very easy)

1. Find the location of the nearest bike station to Trinity College
 - Rating: 2
 - Comments: I had difficulty finding Trinity College on the map. I couldn't find a search function and had to manually look around the map, which was time-consuming.
2. Check the availability of bikes at Smithfield North station
 - Rating: 4
 - Comments: Once I found the station (after some searching), the availability information was clearly displayed and easy to understand.
3. Find the current weather conditions in Dublin
 - Rating: 5
 - Comments: Weather information was prominently displayed on the homepage and very easy to find.
4. Navigate to the "About" section and find information about how to rent a bike
 - Rating: 3
 - Comments: I found the "About" section but the detailed rental information was actually in the "How to Use" section, which caused some confusion.
5. Use the contact form to submit a message

- Rating: 4
- Comments: The contact form was straightforward, but after submission, it wasn't clear how or when I would receive a response.

Overall Impressions

1. Visual Design
 - Rating (1-5): 5
 - Comments: The website looks professional and appealing. I like the color scheme and layout.
2. Ease of Navigation
 - Rating (1-5): 3
 - Comments: The navigation bar is clear, but some information isn't organized where I expected it to be.
3. Information Clarity
 - Rating (1-5): 4
 - Comments: Generally clear information, though rental process could be explained more directly.
4. Response Time
 - Rating (1-5): 4
 - Comments: Pages load quickly, though the map took a bit longer to fully load.
5. Mobile Friendliness (if applicable)
 - Rating (1-5): N/A
 - Comments: Tested only on laptop.

Open Feedback

Please provide any additional feedback or suggestions for improvement:

As someone new to bike sharing, I found the website visually appealing and mostly easy to use. The biggest issue was the lack of a search function for the map, which would make finding specific locations much easier. The information about how to rent bikes should be more prominent, perhaps on the homepage.

Issues Encountered

Please describe any bugs, errors, or confusing aspects you encountered:

1. When submitting the contact form, I got a "Submission complete" notification but no information about how or when I would be contacted.
2. When entering payment information, I had to manually type the "/" in the card expiration date field.
3. After payment, I saw a code in a popup window, but when I closed it, I couldn't find the code again and didn't receive it by email.

Suggestions

What features would you like to see added or improved?

- 1. Add a search function for the map to find specific locations
- 2. Create a user account section to view current bookings and active codes
- 3. Send confirmation emails with rental codes
- 4. Make the payment form more user-friendly with automatic formatting
- 5. Provide clearer information about next steps after form submissions

Performance Test Report - User 4: Tan's brother

Test Environment

- Date: April 13, 2025
- Tester: Tan's brother
- Browser: Safari 13.2
- Device/OS: iPhone 14 Pro / iOS 18.1
- Network Condition: 5G

Page Load Times

Page	First Load (sec)	Cached Load (sec)	Comments
Home	2.9	0.9	Images load progressively
Map	3.7	1.3	Map initially loads slowly
About	1.9	0.7	Clean loading
FAQ	1.7	0.6	Smooth expanding sections
Contact	1.8	0.7	Form elements load well
Login	1.7	0.6	Quick authentication

API Performance

API Endpoint	Response Time (ms)	Success Rate (%)	Comments
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/api/bikesInfo	260	100	Consistent response time
/api/weather	370	98	Occasional delay
/api/stations/{id}	210	100	Good performance
/api/contact_form	230	100	Form submits reliably

Map Performance

- Time to load map: 2.2 seconds
- Time to load all station markers: 1.5 seconds
- Smoothness of map interactions (1-5): 3
- Comments: Map interactions have occasional stutters when panning quickly on mobile

Resource Utilization

- Peak Memory Usage: 420 MB
- CPU Utilization: 27%
- Network Requests Count: 44
- Total Page Size: 3.1 MB

Mobile Performance

- Page Speed Score: 76/100
- First Contentful Paint: 2.1s
- Time to Interactive: 3.6s
- Comments: Mobile performance is acceptable but could be improved

Identified Bottlenecks

1. Map component is heavyweight for mobile devices
2. Multiple font files cause rendering delays
3. Some JavaScript blocks initial rendering

Recommendations

1. Optimize map for mobile by reducing initial markers shown
2. Implement font display swap and font subsetting
3. Consider code splitting to reduce initial JavaScript payload

Additional Notes

The site performs adequately on mobile but could benefit from mobile-specific optimizations. The map component in particular could be better optimized for touch interactions and mobile data connections.

Usability Test Form - User 5: Shelly (classmate)

Tester Information

- Name: Shelly
- Date: April 10, 2025
- Experience level (beginner/intermediate/expert): Intermediate
- Device/windows: Asus / windows 11
- Browser: Chrome

Tasks

Please attempt the following tasks and rate their ease of completion on a scale of 1-5 (1 = very difficult, 5 = very easy)

1. Find the location of the nearest bike station to Trinity College
 - Rating: 3
 - Comments: The map was easy to access, but finding a specific location without a search function was challenging. Had to visually scan and zoom to find Trinity College.
2. Check the availability of bikes at Smithfield North station
 - Rating: 5
 - Comments: Once I located the station, the availability information was very clear with good visual indicators for bike availability.
3. Find the current weather conditions in Dublin
 - Rating: 5
 - Comments: Weather widget is prominently displayed and provides comprehensive information.
4. Navigate to the "About" section and find information about how to rent a bike
 - Rating: 4
 - Comments: Found the information, though I expected it to be under a different section initially.
5. Use the contact form to submit a message
 - Rating: 4
 - Comments: Form was easy to use but the "phone" field label started with lowercase and there wasn't a placeholder for proper format.

Overall Impressions

1. Visual Design
 - Rating (1-5): 5
 - Comments: Very polished and professional design. The color scheme and typography work well together.
2. Ease of Navigation
 - Rating (1-5): 4
 - Comments: Navigation is generally intuitive, but some information is organized differently than I expected.
3. Information Clarity
 - Rating (1-5): 4
 - Comments: Information is presented clearly, though rental options could be more prominently explained.
4. Response Time
 - Rating (1-5): 4
 - Comments: Good performance on iPad, though map initially loads a bit slowly.
5. Mobile Friendliness (if applicable)
 - Rating (1-5): 4
 - Comments: Works well on iPad, scales appropriately, good touch targets.

Open Feedback

Please provide any additional feedback or suggestions for improvement:

The website has a very professional appearance and functions well overall. I particularly like the map and station information display, though adding a search function would be a significant improvement. The tablet experience is good, with appropriate scaling and touch-friendly elements.

Issues Encountered

Please describe any bugs, errors, or confusing aspects you encountered:

1. On the Rent page, the call-to-action buttons have different labels ("Subscribe now", "Start riding", "Get pass") and aren't aligned at the bottom of their containers.
2. After submitting the contact form, there's no clear indication of when or how a response will be provided.
3. When viewing the "How to Use" page in landscape mode, some of the steps appear crowded.

Suggestions

What features would you like to see added or improved?

1. Add a search function to the map to easily find locations
2. Implement consistent button labeling across the site

3. Add user accounts to track rentals and save favorite stations
4. Send confirmation emails when submitting forms or completing transactions
5. Create a route planning feature to help navigate between popular destinations