

High-level accessibility review – BTAA (Collaborative Archive & Data Research Environment (CADRE) Platform)

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CADRE Platform

Summary

Top 3 problems for the CADRE Platform

This assessment covers portions of the CADRE platform. The assessment revealed moderate problems with screen reader compatibility, resulting in screen reader users sometime missing critical information needed to understand content and operate features.

1. **Contrast** – The blue on white color combination used in links and buttons does not provide sufficient contrast. The majority of issues with the site are related to contrast.
2. **Fields and Labels** – Many text fields are missing a programmatic association with a visible label. Also, for groups of related fields (like radio and checkbox) the visual group label is not programmatically associated.
3. **Name Role Value** – A small amount of buttons and links are not semantically identified as interactive elements or are missing attributes to allow the elements to be accessible to AT users.

Accessibility findings

Project wide issues

The issues presented in this section were identified in multiple pages and are recorded here to avoid repetition. These are applicable to each screen. Due to particularities, similar issues are still reported on a page per page basis, where applicable.

Automated findings using Axe

Issues found through automated testing come from the Axe plugin, an open source accessibility testing tool that is available for Chrome, Firefox and Edge. Details here: <https://www.deque.com/products/axe/>.

1. **SC 1.4.3 AA** – Throughout the site, the blue that is used in buttons and links provides poor contrast against white. Insufficient color contrast of 3.97 (foreground color: #ffffff, background color: #007bff, font size: 15.0pt (20px), font weight: normal). Expected contrast ratio of 4.5:1
2. **SC 1.4.3 AA** – The ‘Send Feedback’ floating link provides insufficient color contrast of 2.01 (foreground color: #80bdff, background color: #007bff, font size: 12.0pt (16px), font weight: normal). Expected contrast ratio of 4.5:1.

Additional manual findings using NVDA screen reader

1. **SC 2.2.1 A** – Throughout the platform, a user is timed out of the application without any warning and accessible method to extend the session.
2. **SC 1.4.11 AA** – Throughout the site, when the focus indicator is customized from the default browser indicator, the indicator is low in contrast. A focus indicator of #92C7FF against the most contrasting adjacent color of #007BFF provides 2.2:1 contrast. The expected contrast ratio is 3:1.
3. **SC 1.4.3 AA** – The “This application is currently in alpha. Design, features, and functionality may change prior to final release. User data may be removed periodically.” content is low in contrast in the upper half of the background gradient. #856404 foreground text against #E7DCBA provides 4:1 contrast ratio. The expected contrast ratio is 4.5:1 throughout the gradient.
4. **SC 4.1.2 A** – The “Logout” link is missing an HREF attribute. Without this attribute the link is not recognized as a link, and is not included in the tab order.
5. **SC 2.4.2 A** – All page titles in the platform are “CADRE RAC” which does not sufficiently describe the unique function / content found on each unique page.

1. CADRE RAC – Gateway

Source: <https://cadre.iu.edu/gateway/>

Test case: Test initial interface/landing page to ensure tabs, site navigation, images, icons, and reading order are accessible.

This application is currently in alpha. Design, features, and functionality may change prior to final release. User data may be removed periodically.

Dashboard

Quick Start

- Query Interface**
Pick a dataset and run a search query.
- Jupyter Notebook**
Open a notebook environment to perform complex analytics on CADRE query results

Top Packages

| Package Name | By | Created On | Tool | Input Data Sets | Source Set |
|---------------------------|------------|-------------------------------|-------------------|--|--------------------------|
| demo02-public-all-default | 35 | Sun, 09 Feb 2020 00:16:51 GMT | demo02-public-all | b30d1769-9180-4533-8896-ead7d509cdeb_edges.csv, b30d1769-9180-4533-8896-ead7d509cdeb.csv | |
| demo02_data_package | CADRE Team | Fri, 07 Feb 2020 21:10:46 GMT | demo02_data | ISSIDemoData.tar.gz | Microsoft Academic Graph |
| query2_xnet_package | CADRE Team | Fri, 07 Feb 2020 21:10:46 GMT | query2_xnet | b30d1769-9180-4533-8896-ead7d509cdeb_edges.csv, b30d1769-9180-4533-8896-ead7d509cdeb.csv | |

[Send Feedback](#)

Automated findings using Axe

1. NONE

Additional manual findings using NVDA screen reader

1. **SC 2.4.6 AA** – There are multiple instances of the “Run” and “Clone Package” buttons. They all perform different actions and the programmatic label is insufficient to identify the unique purpose of the buttons.

2. CADRE RAC – Query Builder

Source: <https://cadre.iu.edu/gateway/query-builder/build-query>

Test case: In the “Filters” section choose “Paper Title” from drop down menu.

Type “Lunar Landing” in the “Value” field.

In the “Output Fields” click on “Show All Available Fields” and select “book_title” and “paper_title” in addition to the pre-selected fields.

In the “Job Name” section type in “Accessibility Test” then click “Get Preview”

The screenshot shows the CADRE Query Builder interface. At the top, there is a navigation bar with links for Dashboard, Query Interface, Notebook, Marketplace, and Jobs. The user is logged in as naveesha.maharaj. The main heading is "Query Builder" with sub-links for "Choose Dataset" and "Query Builder". Below this, it says "Query the Microsoft Academic Graph dataset". The "Filters" section has a "Field" dropdown set to "Paper Title" and a "Value" input field containing "Lunar Landing". There is a "Remove Filter" button. Below the filters is a "+ Add Additional Filter" button. The "Output Fields" section has a "Show Selected Only" button and a "Show All Available Fields" button. There are several checkboxes for fields: "paper_id" (checked), "author_id", "author_sequence_number", "authors_display_name" (checked), "journal_id", "conference_series_id", and "conference_instance_id". A "Send Feedback" button is located at the bottom right.

Automated findings using Axe

1. **SC 1.3.1 A** – The ‘Field’, ‘Value’ and ‘Job Name’ input fields are missing a programmatic association with their visible label.

Additional manual findings using NVDA screen reader

1. **SC 1.4.3 AA** – The “Query Builder” content does not provide sufficient contrast against the gradient background. #FFFFFF against a range of #5B9BE4 to #6CAAE2 provides a range of 2.9:1 to 2.5:1 contrast ratio. A contrast ratio of 3:1 is expected throughout the gradient.
2. **SC 1.4.3 AA** – The “Choose Dataset” and “Query Builder” content does not provide sufficient contrast against the gradient background. #FFFFFF against a range of #60A3EA to #71B3EA provides a range of 2.7:1 to 2.2:1 contrast ratio. A contrast ratio of 4.5:1 is expected throughout the gradient.
3. **SC 4.1.2 A** – The “Deselect all” element acts as a button but is not semantically identified as a button, not included in the tab order and cannot be activated by a keyboard.
4. **SC 1.3.1 A** – All radio and checkbox fields are not programmatically associated with their group label in ‘Output Fields’ section.
5. **SC 1.4.10 AA** – All checkboxes in the ‘Output Fields’ section do not reflow to a viewport width of 320px wide. The fields overlap and are cut off.
6. **SC 1.4.12 AA** – When text spacing rules are applied, the “authors_last_known_affiliation_id” field overlaps other content.

3. CADRE RAC – Preview Results

Source: <https://cadre.iu.edu/gateway/query-builder/build-query>

Selector: div.card:nth-child(4) > div:nth-child(2)

Test case: In the “Filters” section choose “Paper Title” from drop down menu.

Type “Lunar Landing” in the “Value” field.

In the “Output Fields” click on “Show All Available Fields” and select “book_title” and “paper_title” in addition to the pre-selected fields.

In the “Job Name” section type in “Accessibility Test” then click “Get Preview”

| authors_display_name | book_title | journal_display_name | original_title | paper_id | paper_title | year |
|---|------------|---|---|------------|---|------|
| D. C. Chandler, H. J. Horn, D. T. Martin | | | An interactive guidance scheme and its application to lunar landing | 836118931 | an interactive guidance scheme and its application to lunar landing | 1965 |
| Florent Valette, Franck Ruffier, Stéphane Viollet, Tobias Seidl | ICRA | | Biomimetic optic flow sensing applied to a lunar landing scenario | 2168816182 | biomimetic optic flow sensing applied to a lunar landing scenario | 2010 |
| Takaaki Yokoyama, Ken Higuchi | | Space Technology Japan, The Japan Society for Aeronautical and Space Sciences | Estimate of Impact Force at Landing on Lunar Surface by SPH Method | 2117367760 | estimate of impact force at landing on lunar surface by sph method | 2007 |
| Babak E. Cohanim, Brian K. Collins | | Journal of Spacecraft | Landing Point | 1967866894 | landing point | 2009 |

Automated findings using Axe

1. NONE

Additional manual findings using NVDA screen reader

1. **SC 4.1.3 A** – The screen reader does not automatically announce that Preview Results are available, when they are available.