

# High-level accessibility review – BTAA (DataPlanet Platform)

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# DataPlanet Platform

## Summary

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### Top 3 problems for the DataPlanet Platform

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

1. **Name, Role, Value** – Tab widgets consistently have errors in implementation. The WAI-ARIA design pattern for tab widgets should be reviewed and closely followed.
2. **Info and Relationships** – Several components such as lists, radio inputs, ARIA menus have errors in implementation. As a result, the semantic structure can become inaccurate.
3. **Reflow** – The entire application does not reflow to a 320px wide viewport.

### Accessibility findings

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#### 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. **No Project Wide Issues found through Automated Checks.**

#### Additional manual findings using NVDA screen reader

1. **SC 1.1.1 A** – The ‘SAGE Publishing’ linked image in the footer has an inaccurate alt attribute of ‘SAGE Publication’.
2. **SC 1.3.1 A** – The section heading “A Universe of Data at Your Fingertips” is not marked up or semantically identified as a heading.
3. **SC 1.4.10 AA** – When a reflow viewport that is 320px wide is applied, the entire site does not reflow to the updated viewport.
4. **SC 4.1.2 A** – The ‘currently selected’ top navigation item does not programmatically indicate its state.
5. **SC 1.3.2 A** – The submenu content under the ‘Help’ menu item is not announced by a screen reader.
6. **SC 1.3.1 A** – Graphics that visually indicate a link opens in a new window are implemented as CSS pseudo-content without any accessible alternative.
7. **SC 1.4.13 AA** – Whenever pop-up tooltip-type content appears on the site, the additional content is not dismissible without moving mouse or keyboard focus.

## 1. DataPlanet Landing Page

**Source:** <https://dataplanet-sagepub-com.offcampus.lib.washington.edu/>

**Test case:** Test the initial interface/landing page to ensure menus, search box, images, icons, sort by, etc. are accessible.

### Automated findings using Axe

1. **SC 1.3.1 A** – The ‘Browse Data By’ tab widget has errors in its implementation. The element with ‘tablist’ role is missing required child elements. Elements with ‘tab’ role are not contained by a ‘tablist’.
2. **SC 1.3.1 A** – The ‘Browse Data By’ items with a role of ‘menuitem’ are not contained within an element with the role ‘menu’ or ‘menubar’.
3. **SC 1.3.1 A** – The ‘Browse Data By’ row of tabs is semantically identified as an unordered list but is missing list items as its children.

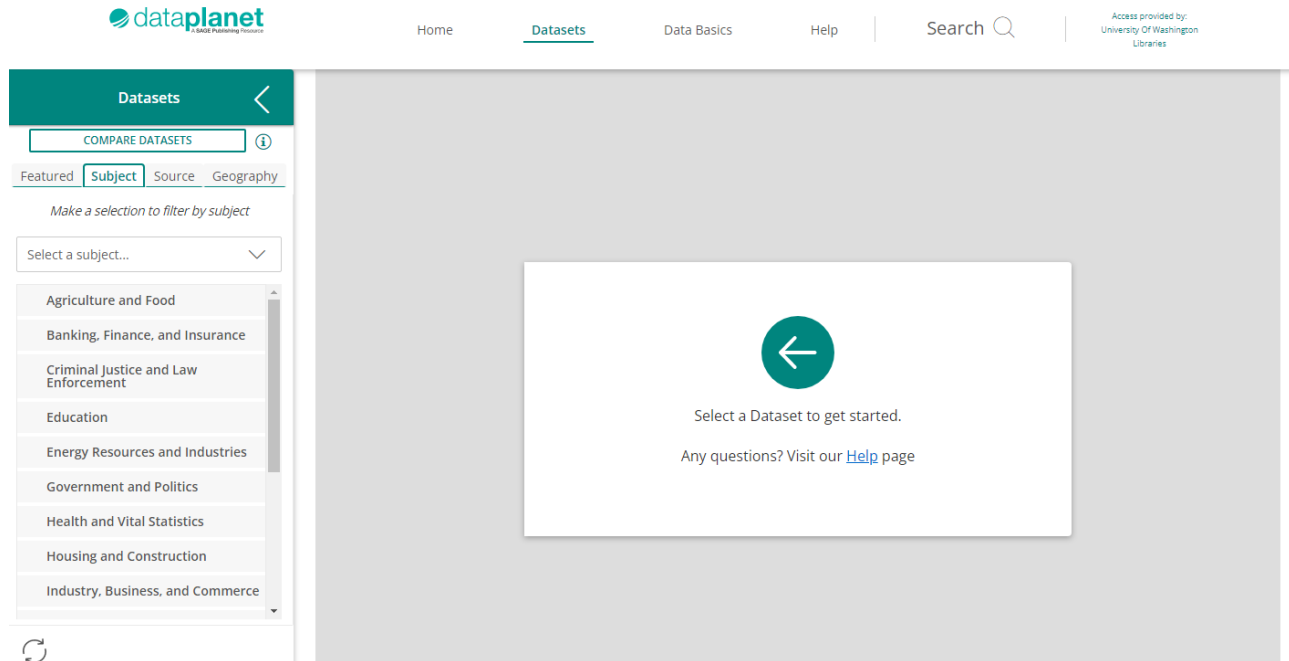
### Additional manual findings using NVDA screen reader

1. **No Issues Found through Manual Checks**

## 2. DataPlanet Datasets Landing Page

**Source:** <https://dataplanet-sagepub-com.offcampus.lib.washington.edu/dataset?view=>

**Test case:** From the initial interface, click the Go to Datasets button and test the datasets landing page to ensure menus, search box, images are accessible.



### Automated findings using Axe

1. **SC 1.3.1 A** – The ‘Compare Datasets’ tab widget has errors in its implementation. The element with ‘tablist’ role is missing required child elements. Elements with ‘tab’ role are not contained by a ‘tablist’.
2. **SC 1.3.1 A** – The ‘Compare Datasets’ row of tabs is semantically identified as an unordered list but is missing list items as its children.
3. **SC 1.3.1 A** – The ‘select a subject’ drop-down menu is missing a programmatic label.

### Additional manual findings using NVDA screen reader

1. **SC 1.4.1 A** – The “us.sagepub.com” and “license” links do not have sufficient contrast between the primary link color and the primary color for surrounding, non-link text. The links also do not have an additional visual indicator to differentiate between link and non-link text.
2. **SC 2.4.7 AA** – The ‘Select a Dataset to get started’ and ‘Help’ links do not receive a visible focus indicator.
3. **SC 4.1.2 AA** – The ‘Datasets’ button is missing its expanded/collapsed state.
4. **SC 3.2.2 A** – When a keyboard user modifies the selected ‘Compare Datasets’ tab, the programmatic focus is unexpectedly moved to the first focusable element within the newly exposed tab panel.
5. **SC 1.4.3 AA** – The “Enter text here” placeholder is low in contrast at 3.1:1 contrast ratio.
6. **SC 4.1.3 AA** – When ‘loading’ messages or animations are present, these status messages are not automatically announced by AT.

### 3. DataPlanet Search Results

**Source:** <https://dataplanet-sagepub-com.offcampus.lib.washington.edu/search?section=set&searchTermsSearchBox=libraries>

**Test case:** Use the search link at the top of the screen to search for Libraries. In the left menu:

- Filter data to 2000-2026
- Limit results to the Occupational Employment Statistics database.

The screenshot displays the DataPlanet search interface. At the top, there is a navigation bar with links for Home, Datasets, Data Basics, Help, and Search. The search results page shows 83 results for the query 'libraries'. The results are filtered to the 'Occupational Employment Statistics' database and are grouped by 'Bureau of Labor Statistics'. The page also shows a 'Percent Relative Standard Error' for the same database. The left sidebar contains filters for Content Type, Years, Databases, and Level of Detail. The search results are displayed in a list format with a 'Read more' link for each result.

#### Automated findings using Axe

1. **SC 1.3.1 A** – The results listing is semantically identified as an ARIA list but is missing items with role of group or listitem as its children.
2. **SC 1.3.1 A** – The result list items are semantically identified as ARIA options but are not nested within a 'listbox' parent.
3. **SC 4.1.2 A** – The result list items are semantically identified as ARIA options, but they each contain nested interactive controls, which will not be properly announced by all AT.
4. **SC 1.3.1 A** – The 'Results Grouping' and 'Results per page' drop-down elements are not programmatically associated with their visible label.

#### Additional manual findings using NVDA screen reader

Not completed due to Insufficient time

#### 4. DataPlanet Narrow Dataset

**Source:** [https://dataplanet-sagepub-com.offcampus.lib.washington.edu/dataset?view=AAgBXQAAGADJAQAAAAAAAAA3\\_zCT30EyCC3PXJlZO\\_it43HRpnYdZC1YTrYZVtV6eBi\\_M2wt5MqtJRFj%24tfyWKd4uJhR6BKBdMJWzjx8cquwoChJ0glOz3eKroteU6xsaT1BPwmVyVS1h6JK8oauPGG1eh\\_TWHmNQQTOCEjnnG07DSciCQlo\\_80F3eEYr7ibOHNPW\\_1CT930d5ihrXlRs7W5Vrt2OrwmW46gMEBaDntfkVM0c4kBUljdtgi5%2445KKsOr%24lwQKd9%24MSPEpd7w](https://dataplanet-sagepub-com.offcampus.lib.washington.edu/dataset?view=AAgBXQAAGADJAQAAAAAAAAA3_zCT30EyCC3PXJlZO_it43HRpnYdZC1YTrYZVtV6eBi_M2wt5MqtJRFj%24tfyWKd4uJhR6BKBdMJWzjx8cquwoChJ0glOz3eKroteU6xsaT1BPwmVyVS1h6JK8oauPGG1eh_TWHmNQQTOCEjnnG07DSciCQlo_80F3eEYr7ibOHNPW_1CT930d5ihrXlRs7W5Vrt2OrwmW46gMEBaDntfkVM0c4kBUljdtgi5%2445KKsOr%24lwQKd9%24MSPEpd7w)

**Test case:** Select the result for Total Employment from the Occupational Employment Statistics database. Test the ability to narrow the dataset using the filter window at the top of the screen by limiting the data to Year = 2018 and 2019, Type = MSA (BLS)

The screenshot shows the DataPlanet interface. At the top, there is a navigation bar with 'Home', 'Datasets', 'Data Basics', 'Help', and a search bar. The main content area is titled 'Current Dataset Clear' and displays 'Total Employment from the Occupational Employment Statistics Database'. A filter window is open, allowing users to refine the data. The filter window includes sections for 'Year' (with a 'Pop Out' button), 'Type' (with options for USA, State, MSA (BLS), Non-Metropolitan Statistical Area, and Division), 'Occupation' (with a 'Pop Out' button and 'Viewing selected options' for Educational Instruction and Library Occupations), and 'Industry'. Below the filter window, there are 'Chart Types' (Trend, Map, Pie, Rank, Table, Export, Cite, Calculator, Embed) and 'Tools'. The main content area also displays a description of the dataset: 'USA - Occupation: Educational Instruction and Library Occupations - Industry Name: Cross-industry, Private, Federal, State, and Local Government and Private Sector 2011 - 2019'.

#### Automated findings using Axe

1. **SC 1.3.1 A** – The ‘Total Employment from the Occupational Employment Statistics Database’ section contains the ARIA attribute `aria-hidden=true` but also includes focusable elements nested within.
2. **SC 4.1.2 A** – The ‘Total Employment from the Occupational Employment Statistics Database’ section contains an ARIA listbox that is missing a programmatic name/label.
3. **SC 1.3.1 A** – The ‘Compare Datasets’ tab widget has errors in its implementation. The element with ‘tablist’ role is missing required child elements. Elements with ‘tab’ role are not contained by a ‘tablist’.
4. **SC 1.3.1 A** – The ‘Compare Datasets’ row of tabs is semantically identified as an unordered list but is missing list items as its children.
5. **SC 4.1.1 A** – Several elements use duplicated IDs: `table-popup_wnd_title`, `cite-popup_wnd_title`, `calculator-popup_wnd_title`, `embed-popup_wnd_title`, `ds-visualization-container`, `table-popup`, `cite-popup`, `calculator-popup`, `embed-popup`
6. **SC 1.3.1 A** – The ‘Bureau of Labor Statistics’ drop-down menu is missing a programmatic label.
7. **SC 1.4.3 AA** – The “Trend” link is low in contrast with a 3.96:1 contrast ratio.
8. **SC 1.4.3 AA** – The “Refine Results” text is low in contrast with a 3.75:1 contrast ratio.
9. **SC 1.4.3 AA** – The “Map” link is low in contrast with a 2.74:1 contrast ratio.

#### Additional manual findings using NVDA screen reader

Not completed due to Insufficient time

## 5. DataPlanet Rank Chart Type

**Source:** [https://dataplanet-sagepub-com.offcampus.lib.washington.edu/dataset?view=AAGBXQAAGADPAQAAAAAAAAAA3\\_zCT30EyCC3PXJlZO\\_jt43HRpnYdZC1YTrYZVtV6eBi\\_M2wt5MqtJRFj%24tfyWKd4uJhR6BKbdMJWzjx8cquwoCidIQWFe5Hq8JC8E7LyZymhX4smcDVEs\\_%24b4vCOPFzSNhXuWa\\_yWzk1moUbojjlps0WmJ4Lvrpw03ozMe5qopiPxA1wy60E0Ael3BiajY7vx329MMjoh%24cpz\\_IGPal4SyPK4xKfCAh7qt6svSPWLzHcudXrcV3yAYK7JlZO13bIA](https://dataplanet-sagepub-com.offcampus.lib.washington.edu/dataset?view=AAGBXQAAGADPAQAAAAAAAAAA3_zCT30EyCC3PXJlZO_jt43HRpnYdZC1YTrYZVtV6eBi_M2wt5MqtJRFj%24tfyWKd4uJhR6BKbdMJWzjx8cquwoCidIQWFe5Hq8JC8E7LyZymhX4smcDVEs_%24b4vCOPFzSNhXuWa_yWzk1moUbojjlps0WmJ4Lvrpw03ozMe5qopiPxA1wy60E0Ael3BiajY7vx329MMjoh%24cpz_IGPal4SyPK4xKfCAh7qt6svSPWLzHcudXrcV3yAYK7JlZO13bIA)

**Test case:** Change the chart type from Trend to Rank using the Chart Types menu  
View a Table of the data using the Tools menu and use the Export to Excel button

The screenshot shows the DataPlanet web application interface. The top navigation bar includes 'Home', 'Datasets', 'Data Basics', 'Help', and a search bar. The main content area is titled 'Current Dataset Clear' and displays 'Total Employment from the Occupational Employment Statistics Database'. The interface features several filter panels: 'Type' (USA, State, MSA (BLS), Non-Metropolitan Statistical Area, Division), 'Period' (Year), 'Year' (2019-2013), 'Occupation' (Educational Instruction and Library Occupations), and 'Industry'. Below the filters is a 'Chart Types' section with options for Trend, Map, Pie, and Rank (selected). A 'Tools' section includes buttons for Table, Export, Cite, Calculator, and Embed. The 'Export' button is highlighted. The bottom of the page shows the chart title and a brief description of the data.

### Automated findings using Axe

1. **SC 4.1.2 A** – The custom ARIA radio inputs use ARIA attributes that are not valid in the chosen role, 'radio'.
2. **SC 1.3.1 A** – The 'Total Employment from the Occupational Employment Statistics Database' section contains the ARIA attribute `aria-hidden=true` but also includes focusable elements nested within.
3. **SC 4.1.2 A** – The 'Total Employment from the Occupational Employment Statistics Database' section contains an ARIA listbox that is missing a programmatic name/label.
4. **SC 1.3.1 A** – The 'Compare Datasets' tab widget has errors in its implementation. The element with 'tablist' role is missing required child elements. Elements with 'tab' role are not contained by a 'tablist'.
5. **SC 1.3.1 A** – The 'Compare Datasets' row of tabs is semantically identified as an unordered list but is missing list items as its children.
6. **SC 1.3.1 A** – The 'Export' drop-down is semantically identified as a radiogroup but is missing radio items as its children.
7. **SC 4.1.1 A** – Several elements use duplicated IDs: `table-popup_wnd_title`, `cite-popup_wnd_title`, `calculator-popup_wnd_title`, `embed-popup_wnd_title`, `ds-visualization-container`, `table-popup`, `cite-popup`, `calculator-popup`, `embed-popup`
8. **SC 1.3.1 A** – The 'Export' drop-down contains an unordered list that contains nested elements that are not semantically identified as list items.
9. **SC 1.3.1 A** – The 'select a subject' drop-down menu is missing a programmatic label.
10. **SC 1.4.3 AA** – The "Rank" link is low in contrast with a 3.96:1 contrast ratio.
11. **SC 1.4.3 AA** – The "Refine Results" text is low in contrast with a 3.75:1 contrast ratio.



**Additional manual findings using NVDA screen reader**

Not completed due to Insufficient time