**Accessibility issues - Introduction to Python**

|  |  |  |
| --- | --- | --- |
| **WCAG Guidline** | **Page & Example** | **Fix** |
| 1.1.1 Non-text Content (Level A)  1.3.1 Info and Relationships (Level A)  2.4.6 Headings and Labels (Level AA)  3.3.2 Labels or Instructions (Level A) | All chapters   * multiple missing form label –text areas have no label. The containing input area div has an aria-label attribute but this is not associated with the text area   Chapter 2   * Suspicious alternative text – image of dog has alt text of “drawing” | If a text label for a form control is visible, use the <label> element to associate it with its respective form control. If there is no visible label, either provide an associated label, add a descriptive title attribute to the form control, or reference the label(s) using aria-labelledby. Labels are not required for image, submit, reset, button, or hidden form controls.  Ensure that the alternative text for the image or image input provides a succinct, yet equivalent alternative to the content and function of the image. Screen readers and browser presentation inform the user that the object is an image, so alternative text of "image of..." (and similar) should be avoided. If the image does not convey content or if the content is presented in nearby text (e.g., a caption), null/empty alternative text (alt="") is appropriate. |
| 1.3.1 Info and Relationships (Level A)  2.4.1 Bypass Blocks (Level A)  2.4.6 Headings and Labels (Level AA) | Chapter 1   * Skipped heading levels – After Interacting with Jupyter H2 Skips to H4 with Cells and Markdown cells. * Multiple H1 – Headers H1 should be H2.   Chapter 3   * Multiple H1 – Reading in Other File types H1 should be H2 and h2’s below should be h3   Chapter 4   * 2 Possible table caption – datasets, logical comparison statement   Chapter 5   * Multiple H1 – Missing values H1 should be H2 * Possible table caption – datasets   Chapter 6   * Possible table caption   Chapter 7   * Possible table caption – load in the data, comparison & logical operators, logical operators   Chapter 7   * Multiple H1 – Functions for dataframes H1 should be H2 and h2’s below should be h3 | Restructure the document headings to ensure that heading levels are not skipped. Ensure that ther is only 1 H1  A table caption should be associated with a table using the <caption> element so it will be read by a screen reader with the tabl If the text is a description of the table, associate the text with the table using the <caption> element (<caption> should be the first element within the <table>). e content. |
| 2.4.4 Link Purpose (In Context) (Level A) | Chapter 1   * Suspicious link text - Headers section – link text is “link”   Chapter 2, 3, 4   * 2 X Suspicious link text – “here” used as link text | Where appropriate, reword the link text so that it is more descriptive of its destination when read out of context. Remove any extraneous text (such as "click here"). |
| Noscript element | Chapter 1, 2, 3, 6, 7,8   * Noscript element – above header – enable js message | Content within <noscript> is presented if JavaScript is disabled. Because nearly all users (including users of screen readers and other assistive technologies) have JavaScript enabled, <noscript> cannot be used to provide an accessible version of inaccessible scripted content.  Ensure that scripted content is accessible. The <noscript> content will be presented to very few users, but must be accessible if used. |
| 2.4.3 Focus Order (Level A) | All Chapters   * multiple Tabindex value of 2 | Tabindex values of 1 or greater specify an explicit tab/navigation order for page elements. Because it modifies the default tab order, cause confusion, and result in decreased keyboard accessibility, it should be avoided.  If the natural tab order is already logical, remove the tabindex. Otherwise, consider restructuring the page so that tabindex is not needed. If tabindex is maintained, ensure that the resulting navigation is logical and complete. |
| Redundant title text | All chapters   * Run button on toolbar has title of run | The title attribute value is used to provide advisory information. It typically appears when the users hovers the mouse over an element. The advisory information presented should not be identical to or very similar to the element text or alternative text.  In most cases the title attribute can be removed, otherwise modify it to provide advisory, but not redundant information. Note that the title text may or may not be read by a screen reader and is typically inaccessible to sighted keyboard users. |
| 1.4.3 Contrast (Minimum) (Level AA) | Chapter 2-8   * multiple contrast errors all in code sections | Increase the contrast between the foreground (text) color and the background color. Large text (larger than 18 point or 14 point bold) does not require as much contrast as smaller text. |
| Link to PDF Doc | Chapter 5   * link to pdf doc | Unless authored with accessibility in mind, PDF documents often have accessibility issues. Additionally, PDF documents are typically viewed using a separate application or plug-in, and can thus cause confusion and navigation difficulties.  Ensure the PDF document is natively accessible. Additionally, inform the user that the link will open a PDF document. Because PDF documents may have limitations in accessibility (particularly for complex content) and require a separate program, HTML content should often be used in place of or in addition to the PDF document. |