

# SDG Badge Extension - UI Fixes Summary

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## Overview

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This document summarizes the resolution of 4 critical UI issues in the SDG Badge browser extension:

1. **CSS Interference:** Extension CSS affecting entire webpage
2. **Popup Width Issue:** Popup window too narrow, hover content cut off
3. **Floating Mode Problems:** Indefinite “analyzing content...” and broken close button
4. **Sidebar Text Visibility:** White text on white background issue

## Issue 1: CSS Interference Fix

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**Problem:** Extension's `widget.css` contained global selectors ( `h1` , `h2` , `.description` , etc.) that were affecting the entire webpage, causing layout issues.

**Solution:**

- **File Modified:** `assets/css/widget.css`
- **Changes Made:**
  - Namespaced all CSS selectors to only apply to extension elements
  - Added specific selectors like `.sdg-badge-widget .h1` , `.sdg-badge-container .h1`
  - Added CSS isolation injection in `content.js` with `injectCSSIsolation()` method
  - Prevented global style pollution using CSS containment

**Result:** Webpage layouts are no longer affected by extension CSS. All styles are properly isolated to extension components only.

## Issue 2: Popup Width Fix

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**Problem:** Popup window was only 300px wide, causing the “Top 3 SDG classifications” hover content to be cut off.

**Solution:**

- **File Modified:** `popup/popup.css`
- **Changes Made:**
  - Increased popup width from `300px` to `420px` (line 134)
  - Adjusted `.sdg-legend` positioning and width for popup mode:
    - Left position: `50px` (adjusted for popup)
    - Width: `320px` (fits within 420px popup width)
  - Created popup-specific legend positioning in `widget.css`

**Result:** Popup window is now wide enough to accommodate all hover content without truncation.

## Issue 3: Floating Mode Fix

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**Problem:** Floating widget showed “Analyzing content...” indefinitely and close button didn't work properly.

**Solution:**

- **File Modified:** `scripts/content.js`
- **Changes Made:**
- Simplified `displayResults()` method to create a direct SDG display instead of complex widget loading
- Replaced complex widget initialization with simple HTML display showing:
  - SDG goal number
  - Confidence percentage
  - SDG icon
- Fixed close button event listener with proper null checking
- Ensured proper data flow from API to display

**Result:** Floating widget now displays SDG analysis results immediately and close button works correctly.

## Issue 4: Sidebar Text Visibility Fix

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**Problem:** White text on white background made “Top 3 SDG classifications” unreadable in sidebar.

**Solution:**

- **Files Modified:** `assets/css/widget.css` and `sidebar/sidebar.css`
- **Changes Made:**
- Removed conflicting styles from `widget.css` for sidebar legend
- Enhanced `sidebar.css` with proper contrast:
  - Background: `#f8f9fa` (light gray)
  - Text color: `#212529` (dark gray) with `!important` flags
- Added specific styling for `h3`, `li`, `p`, and `a` elements
- Added border for better definition

**Result:** Sidebar text is now clearly visible with proper dark text on light background contrast.

## Additional Improvements

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### CSS Isolation Enhancement

- Added `injectCSSIsolation()` method in `content.js`
- Prevents any extension styles from affecting webpage
- Uses CSS revert to reset potential global styles

### Responsive Design

- Improved popup layout for better accommodation of content
- Better positioning for different view modes (popup, floating, sidebar)
- Maintained functionality across all three view modes

### Error Handling

- Added proper null checking for DOM elements
- Improved event listener attachment with safety checks
- Better error display in floating mode

## Files Modified

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1. **assets/css/widget.css**
  - Namespaced all CSS selectors
  - Added mode-specific legend positioning
  - Removed conflicting sidebar styles
2. **popup/popup.css**
  - Increased popup width from 300px to 420px
3. **scripts/content.js**
  - Simplified floating widget display logic
  - Fixed close button event handling
  - Added CSS isolation injection
4. **sidebar/sidebar.css**
  - Enhanced text contrast with proper colors
  - Added comprehensive styling for all text elements

## Testing Instructions

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1. Load the extension in Chrome/Edge developer mode
2. Navigate to `test_ui_fixes.html` to verify fixes
3. Test each mode:
  - **Popup Mode:** Check width and hover content
  - **Floating Mode:** Verify results display and close button
  - **Sidebar Mode:** Check text visibility and contrast
4. Verify no CSS interference with webpage layout

## Verification Results

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- ✓ **CSS Interference:** Webpage displays normally, no layout issues
- ✓ **Popup Width:** Hover content fits properly within expanded popup
- ✓ **Floating Mode:** Displays SDG results correctly, close button works
- ✓ **Sidebar Text:** Clear dark text on light background, fully readable

## Extension Status

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The SDG Badge extension is now fully functional with all UI/UX issues resolved:

- ✓ All 3 view modes work correctly
- ✓ Proper CSS isolation prevents webpage interference
- ✓ Responsive design across all modes
- ✓ Accessible text contrast and visibility
- ✓ Functional interactive elements

The extension is ready for production use and deployment.