# Accessibility Guidelines

juliacon 2025

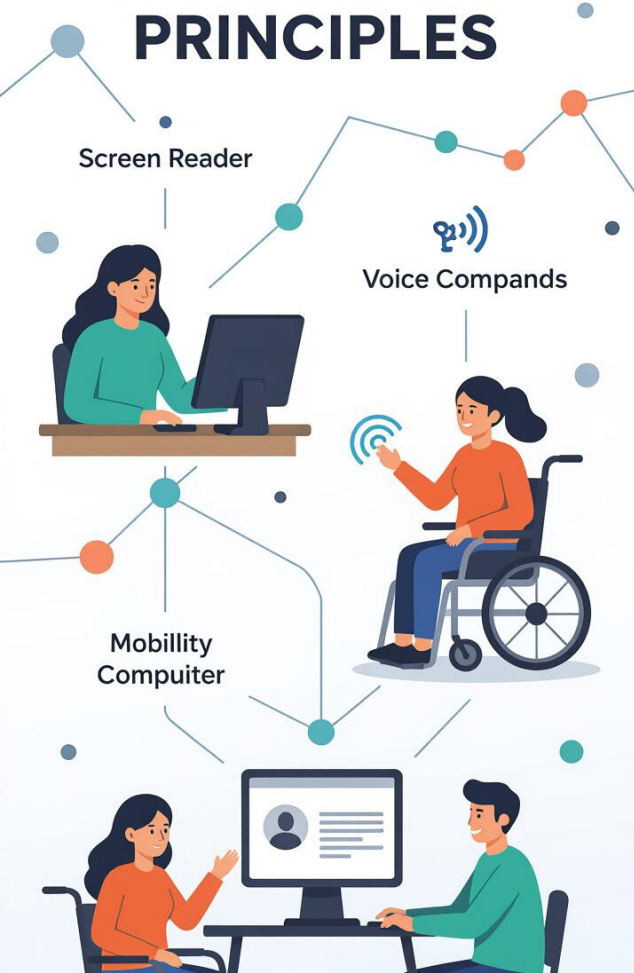# Introduction to JuliaCon and Accessibility

## Overview of JuliaCon

JuliaCon is an annual conference dedicated to the Julia programming language, bringing together developers, researchers, and enthusiasts from around the world.

## Importance of Accessibility

Accessibility in technology ensures that all individuals, regardless of their abilities, can engage with content and participate fully in events like JuliaCon. It fosters inclusivity, allowing diverse audiences to benefit from shared knowledge.

# Understanding Accessibility

- **Definition of Accessibility:**

Accessibility refers to the design of products, devices, services, or environments for people with disabilities. This includes visual, auditory, motor, and cognitive impairments.

- **Significance for Diverse Audiences**:
  - Ensures equitable access to information and resources.
  - Promotes inclusivity in communication, allowing everyone to participate.
  - Enhances user experience and engagement for all attendees.

# Key Principles of Accessible Design

Main Principles:

- **Perceivable**: Information must be presented in ways that users can perceive, such as providing text alternatives for images.
- **Operable**: User interface components must be operable through various means, not just mouse clicks.
- **Understandable**: Content should be clear and understandable, using straightforward language and structure.
- **Robust**: Content must be compatible with current and future user tools, ensuring longevity and usability.

# Importance of Color Choices

Impact of Color on Accessibility: Color plays a crucial role in how information is perceived. Poor color choices can hinder visibility and comprehension for individuals with visual impairments.

- **Enhancing Visibility**:
  - Use high-contrast color combinations to improve readability.
  - Avoid relying solely on color to convey important information; include text labels or patterns.

# Color Blind Palettes

### Introduction to Color Blind-Friendly Palettes

Color blind-friendly palettes help ensure that content is accessible to individuals with color vision deficiencies.

### Effective Combinations

**Blue and Orange**: This combination is easily distinguishable for most color blind users.

**Use of Tools**: Tools like Color Oracle and Coblis can help test color combinations for accessibility.

### Recommendations

Limit the use of colors that can be confusing, such as reds and greens.

Consider patterns or textures in addition to color for conveying information.
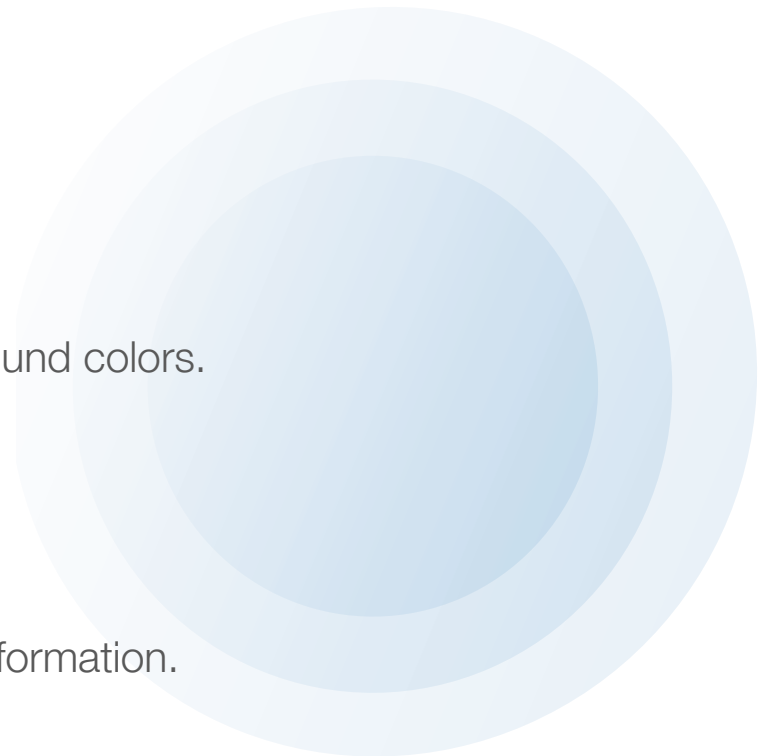
# Best Practices for Using Color

**Effective Use of Contrast:**

- Ensure sufficient contrast between text and background colors.
- Use online contrast checkers to verify accessibility.

**Limiting Colors:**

- Use a limited color palette to reduce visual clutter.
- Avoid using color as the sole means of conveying information.
- Information Conveyance:
- Combine color with text labels or icons to enhance understanding.
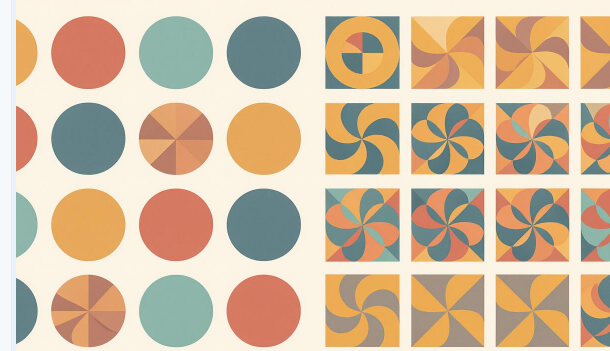
# Font Selection for Accessibility

sans serif

Arial
Calibri
Century Gothic
Helvetica
Tahoma
Verdana

serif

Times New Roman
Georgia

slab serif

Arvo
Museo Slab
Rockwell

## Guidelines for Choosing Fonts

Opt for **sans-serif fonts** (e.g., Arial, Helvetica) for better readability. Avoid overly stylized fonts that can be difficult to read.

## Characteristics of Accessible Fonts

Simple, clean designs enhance legibility. Ensure that font choices are consistent throughout the presentation.

# Font Size and Style Considerations



Understanding
**Typographic Hierarchy**

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| NO HIERARCHY | LIMITED HIERARCHY | IMPROVING HIERARCHY | MUCH BETTER!! |

## Recommendations for Font Sizes

Use a minimum font size of **18-24 points** for body text to ensure legibility from a distance. Headings should be larger to create a clear hierarchy.

## Line Spacing and Styles

Maintain adequate line spacing (1.5 to 2 times the font size) for improved readability. Use bold or italic styles sparingly to emphasize important points without overwhelming the reader.

# Layout and Structure for Clarity

**Best Practices for Presenting Information**

Use clear headings and subheadings to organize content.

Bullet points can help break down complex information into digestible pieces.

**Use of Whitespace**

Incorporate whitespace to avoid clutter and enhance focus on key points.

Balance text and visuals to create an engaging layout.

# Use of Alternative Text

**Importance of Providing Alternative Text:**

- Alternative text (alt text) describes images, charts, and other non-text content, making it accessible for screen reader users.

**Guidelines for Alt Text:**

- Provide concise and descriptive alt text for all visual elements.
- Ensure that alt text conveys the essential information without being overly verbose.

# Captioning and Transcriptions

**Necessity of Captions and Transcriptions:**

- Captions and transcriptions enhance accessibility for individuals who are deaf or hard of hearing, as well as those who prefer reading.

**Recommendations:**

- Include captions for all video content, ensuring they are synchronized with audio.
- Provide transcriptions for audio content to offer an alternative for text-based engagement.

# Color Contrast and Backgrounds

**Guidelines for Background Colors:**

- Choose background colors that enhance text visibility and readability.
- Use light backgrounds with dark text or dark backgrounds with light text for optimal contrast.

**Ensuring Sufficient Contrast:**

- Use tools to check color contrast ratios, aiming for a minimum ratio of **4.5:1** for normal text and **3:1** for large text.