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# Adaptive UI Documentation

## Overview

AutomaSpec implements a fully responsive interface that adapts seamlessly across mobile, tablet, and desktop devices while maintaining functionality and visual consistency.

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## Device Support

### Three Device Types Supported

- **Mobile** (375px - 767px): Touch-optimized, single-column layout
- **Tablet** (768px - 1023px): Enhanced layouts with balanced information density
- **Desktop** (1024px+): Full two-panel dashboard with maximum functionality

## Key Features

- Relative units throughout (rem, em, %, vw, vh)
  - No overlapping elements at any screen size
  - Correct functionality with browser zoom
  - Responsive breakpoints: 640px, 768px, 1024px, 1280px, 1536px
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## Visual Criteria

### Typography & Icons

- Scalable fonts using relative units
- SVG icons (Lucide React) - scale without distortion
- Unified typography across all devices
- Consistent color palette via CSS custom properties

### Interactive Elements

- Minimum 44px touch targets for mobile
- WCAG 2.1 AA contrast compliance (4.5:1 minimum)
- Accessible form elements and buttons

### Theme Support

- Light/Dark theme with smooth transitions
  - System preference detection
  - Theme toggle available throughout
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## Structural Criteria

### Adaptive Layout

- Flexbox/Grid-based responsive system
- Blocks scale appropriately with screen width
- Navigation always accessible
- Mobile: Sheet-based sidebar
- Desktop: Fixed sidebar with collapse

### Component Library

- Reusable responsive components

- Size variants (sm, md, lg)
  - Mobile-aware dialogs and sheets
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## Screenshots

### Login Page

#### Desktop (1920×1080)



Login Desktop

**Features:** - Centered layout with optimal spacing - Full-width form elements - Clear visual hierarchy

#### Tablet (768×1024)



Login Tablet

**Adaptations:** - Maintained centered layout - Touch-friendly buttons - Readable typography

#### Mobile (375×667)



Login Mobile

**Adaptations:** - Full-width form - Stacked social login buttons - Single-column layout

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## Dashboard Page

#### Desktop (1920×1080)



Dashboard Desktop

**Layout:** - Two-panel layout (50/50 split) - Tree navigation left, details panel right - Full header navigation

#### Tablet (768×1024)



Dashboard Tablet

**Adaptations:** - Responsive panel widths - Maintained two-column layout - Touch-optimized interactions

## Mobile (375x667)



Dashboard Mobile

**Adaptations:** - Single-column stacked layout - Full-width panels - Mobile-optimized navigation

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# Technical Implementation

## Framework & Tools

- **Next.js 16** - React framework
- **Tailwind CSS 4** - Utility-first CSS
- **TypeScript** - Type safety
- **Lucide React** - SVG icons

## Responsive Features

- Custom `useIsMobile()` hook (breakpoint: 768px)
- Tailwind responsive utilities (`sm:`, `md:`, `lg:`)
- CSS custom properties for theming
- Container queries where applicable

## Browser Support

- Modern browsers (Chrome, Firefox, Safari, Edge)
  - Mobile browsers (iOS Safari, Chrome Mobile)
  - Full touch support
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# Compliance Summary

## Minimum Requirements

- 3 device types (mobile, tablet, desktop)
- Correct display at different resolutions
- Relative units throughout
- Scalable fonts and icons
- 44px+ touch targets

- WCAG 2.1 AA contrast
- Adaptive grid system
- Always accessible navigation

## Enhanced Features

- Light/dark theme support
  - SVG icons throughout
  - System theme detection
  - Smooth theme transitions
  - Mobile-optimized layouts
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## Conclusion

AutomaSpec provides a comprehensive adaptive UI that meets all requirements for responsive design, ensuring functional consistency, visual integrity, and optimal user experience across all device types.