Color Theory — One-Page Cheat Sheet

1) Color Basics
Color is the perception of visible light (~400–700 nm). Short wavelengths appear blue/violet; long wavelengths appear red.

2) Color Models

Additive (RGB – Screens): Red + Green = Yellow; RGB combined = White.
Subtractive (CMY/CMYK – Print): Cyan + Magenta + Yellow ≈ Black; K = true black.

3) Color Wheel
Primary: RYB (art) or RGB (light). Secondary: Green, Orange, Purple. Tertiary: primary + adjacent secondary.

4) Color Harmony
Complementary (opposites, high contrast); Analogous (neighbors, calm); Triadic (balanced); Monochromatic (single hue).

5) HSV
Hue = color type; Saturation = intensity; Value = brightness. Lower saturation improves readability.

6) Warm vs Cool
Warm (red/orange/yellow): energy & urgency. Cool (blue/green/purple): calm & trust.

7) Common Color Psychology

Red	Energy, danger
Blue	Trust, calm
Green	Nature, safety
Yellow	Optimism, warning
Orange	Action, friendliness
Purple	Luxury, creativity
Black	Power, elegance
White	Clean, simplicity

8) Practical Rules
Use 2–3 main colors; ensure high contrast; avoid red–green combos; never rely on color alone; desaturate technical diagrams.

9) Accessibility
Text contrast ≥ 4.5:1; test in grayscale; use color + shape or labels.

10) Quick Picks
Presentations: blue + gray + accent. Engineering diagrams: low saturation, high contrast. Dashboards: green=good, yellow=caution, red=alert.