Visual Hierarchy & Layout

- Put decision-critical modules in the first (left) column: Current Risk Score → AI Risk Narrative → Risk Score History.
- Move context-only cards (Market Data, Sentiment) to the right column.
- Group all time-series charts in one horizontal "Market Trend" strip for easy comparison.
- Arrange components to follow the natural F-pattern scan path (top-left downward, then across).

Data Visualization Improvements

- Replace the donut chart with a **100 % stacked bar** (or horizontal waterfall) to show component weights accurately.
- Add hover tooltips displaying exact % and week-over-week Δ .
- Convert the 1-Day Crash Probability bar to a **bullet chart** with clear 0 %, 50 %, 100 % ticks (or add tick labels to current bar).
- Enhance the Risk Score History line:
- Overlay a faint 30-day moving average or confidence band.
- Provide 1 m / 3 m / 6 m range toggles.

Accessibility & Theming

- Ensure all text & lines meet WCAG-AA contrast; adjust red (#E96565 → #F87171) or lighten card background.
- Use a color-blind-safe palette (e.g., Tableau 10 / IBM Carbon) for component colors.
- Offer a **Dark** ↔ **Light theme toggle** so printed screenshots stay legible.

Micro-UX Trust Builders

- Display "Last updated HH:MM ET" under the main risk score.
- Add ▲▼ trend arrows plus 1-day % change next to SPY, VIX, DXY.
- Provide tooltips that explain formulas & model horizons.
- Add a "Copy to clipboard" icon beside the Recommendations list for quick sharing.

Interaction & Drill-Down

- Make metric cards clickable to open modal drill-downs (e.g., Reddit sentiment → top posts).
- Let users set personal alert thresholds; show their dashed line on charts.
- Add search/filter box above the real-time log panel.

Performance & Responsiveness

- Use **skeleton loaders** while data fetches to signal progress.
- Lazy-load heavyweight charts (e.g., Risk Components) on scroll.
- On < 768 px, collapse to single-column; keep Risk Score & Narrative sticky at top.

► Content & Tone

- Keep AI narrative concise (\leq 280 chars) and timestamped.
- Soften prescriptive language: "If equity exposure > 60 %, consider defensive allocation ...".

► Nice-to-Have Road-Map Enhancements

- Scenario slider: drag VIX level → dynamic risk score update.
- One-click **Export PNG/PDF** of current dashboard view.
- Bottom ticker tape cycling key macro indicators (SPY, NQ, TNX, Gold).

Quick Wins (Low Effort, High Impact)

- 1. Add "Last updated" timestamp & hover tooltips.
- 2. Swap donut \rightarrow stacked bar for Risk Components.
- 3. Re-stack layout (critical left column order).
- 4. Update colors to pass WCAG contrast checker.

Implementing the Quick Wins first will immediately improve clarity, trust, and accessibility; the remaining items can roll into a phased roadmap as resources allow.