**Modules to Update**

1. **modules/scan\_market.py**
   * Purpose: Where stocks are scanned and evaluated.
   * Update Needed: Use generate\_ai\_score for each scanned stock instead of placeholder or default values for AI Recommendation (0–10).
2. **modules/profit\_plan.py**
   * Purpose: Builds a smart profit plan using stock data.
   * Update Needed: Ensure it uses AI scores generated during the scan process, or optionally re-evaluates with generate\_ai\_score.
3. **(Optional) modules/risk\_allocation.py**
   * If AI recommendations are used to adjust risk weightings, you may also want to add or display AI feedback here.

Would you like me to begin integrating it into the scan module first?

**How Functions Integrate into Risk & Recommendation Logic**

**1. get\_stock\_summary()**

* **Purpose:** Adds a concise qualitative narrative to the stock’s technical context.
* **Usage:** Supplement AI Notes or stock descriptions in the UI for clearer insights.
* **Example:** Shown next to graphs or when detailing stock cards.

**2. get\_risk\_assessment()**

* **Purpose:** Evaluates sector-related risk by factoring in volatility and macro trends.
* **Usage in Risk Score:**
  + Add a risk\_factor attribute per stock.
  + Use this to weight or adjust investment share or warning levels.
* **Integration Idea:**

python

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risk\_text = get\_risk\_assessment(ticker, row["Volatility (%)"], row["Sector"])

row["Risk Commentary"] = risk\_text

**3. get\_momentum\_analysis()**

* **Purpose:** Measures if recent momentum is sustainable.
* **Usage in AI Scoring:**
  + If momentum is fading, reduce recommendation score.
  + If supported by volume, boost it.
* **Integration Idea:**

python

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momentum\_note = get\_momentum\_analysis(ticker, row["Change (%)"], row["Volume"])

**4. get\_sentiment\_analysis()**

* **Purpose:** Gauges market bias using news headlines.
* **Usage in Risk Adjustment or Confidence Scoring.**
* **Enhancement Tip:** Integrate Google/Bloomberg headlines before feeding into the model.

**5. get\_final\_score\_justification()**

* **Purpose:** Wraps up all previous insights into a coherent score rationale.
* **Usage:** Justifies the AI score in the UI or report.
* **Integration Tip:**

python

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details = f"{summary}\n{momentum\_note}\n{sentiment\_note}"

justification = get\_final\_score\_justification(details)

**🧠 Final Integration Structure**

Each stock's row in your analysis DataFrame can include:

* AI Recommendation (0–10) ← from generate\_ai\_score() or refined version
* AI Notes ← concat of summary, risk, momentum, sentiment
* Risk Commentary, Sentiment Tag, Momentum Note ← new columns for display/tooltips

Would you like help wiring these into the actual risk scoring function or enhancing the display in your profit plan module?