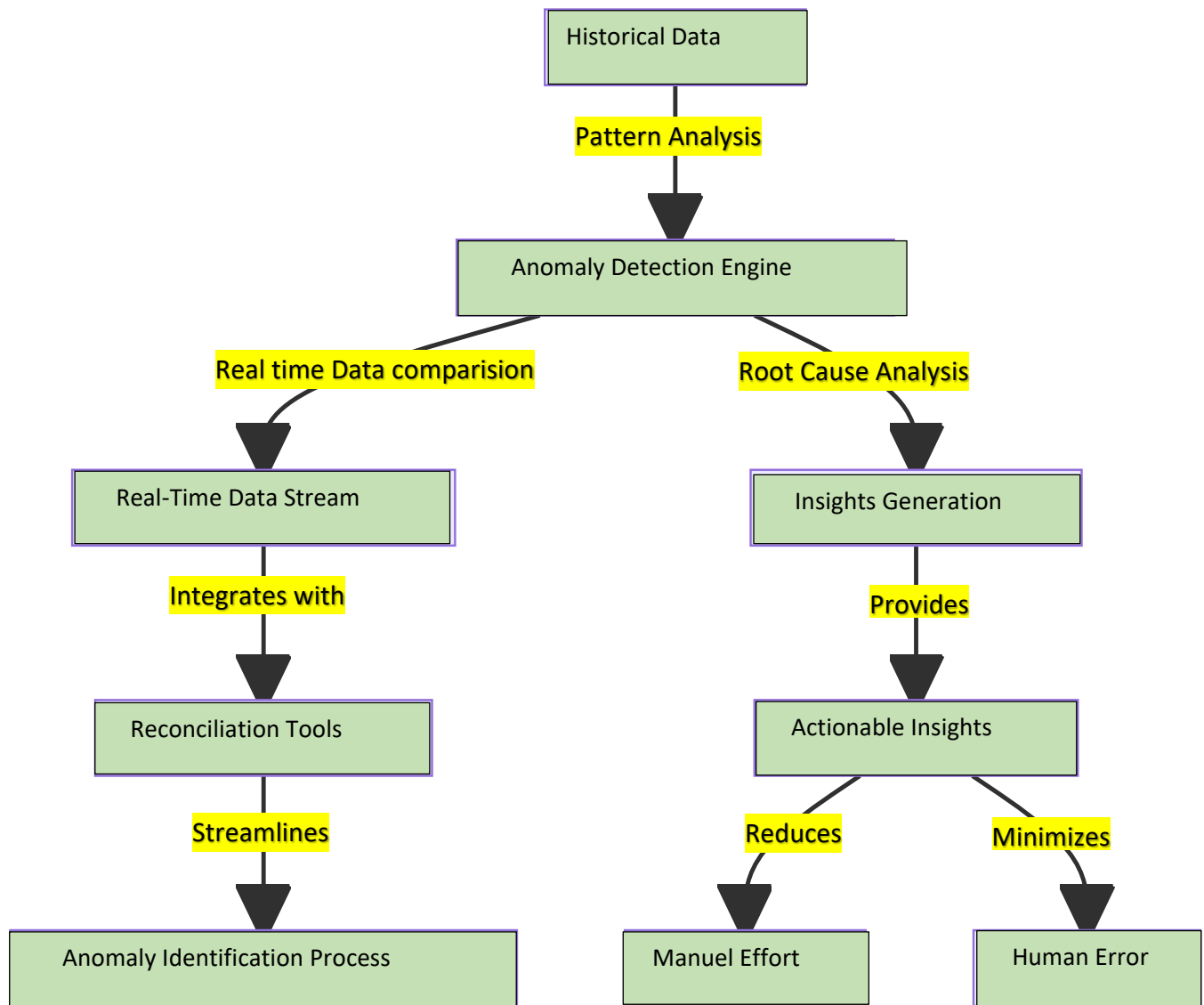


## Architecture diagram for the anomaly detection system:



1. **Historical Data Analysis:** The system begins by leveraging historical data, which contains past reconciliation records and patterns. This data is essential for establishing baselines and understanding normal behavior within the reconciliation process.
2. **Anomaly Detection Engine:** The core component of the system is the Anomaly Detection Engine (ADE). This engine continuously analyzes incoming real-time data by comparing it against the established historical baselines to identify any anomalies or deviations.

3. **Real-time Data Stream:** The system receives real-time data from ongoing reconciliation activities. This data is crucial for timely detection of any discrepancies or unusual patterns that may arise during the reconciliation process.
4. **Root Cause Analysis:** Upon detecting anomalies, the ADE initiates a root cause analysis to determine the underlying reasons for the discrepancies. This step is essential for understanding why an anomaly occurred and how it can be addressed.
5. **Integration with Reconciliation Tools:** The system is designed to seamlessly integrate with existing reconciliation tools. This integration allows for a more efficient workflow, enabling the automatic identification of anomalies without disrupting current processes.
6. **Actionable Insights Generation:** The Insights Generator (IG) processes the findings from the ADE and provides actionable insights regarding the detected anomalies. These insights help users understand the implications of the anomalies and decide on appropriate actions.
7. **Reduction of Manual Effort:** By automating the anomaly detection process, the system significantly reduces the manual effort required for anomaly identification. This automation allows reconciliation teams to focus on more strategic tasks rather than routine checks.
8. **Minimization of Human Error:** The system's automated nature also minimizes the risk of human error in anomaly detection. By relying on data-driven analysis, the likelihood of overlooking critical discrepancies is greatly reduced.