ReconcileX - AI Agent powered Reconciliation System🚀

Problem Statement - Smarter Reconciliation and Anomaly Detection using Gen AI

Team- Hack GPT
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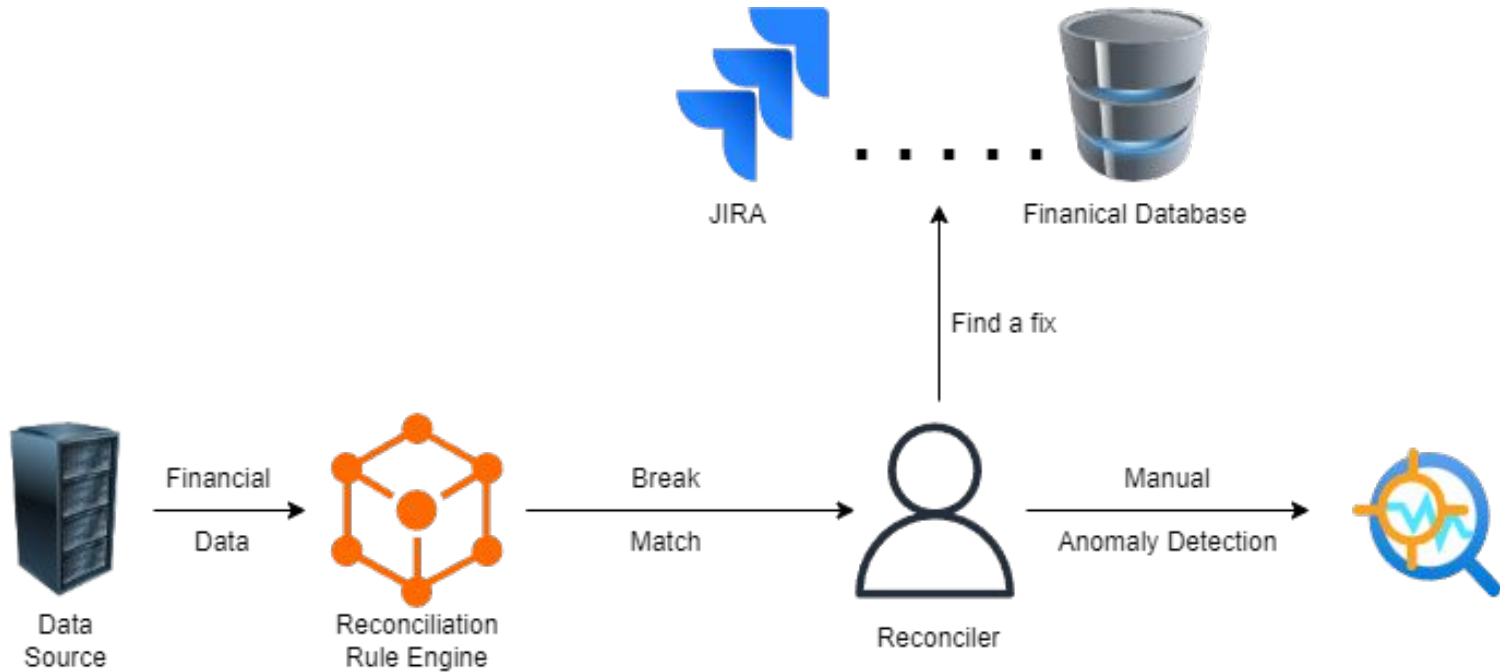Kirthi Govindarajan
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Key Areas Of Improvement🚀

- **Manual-Intensive & Inefficient:** Traditional reconciliation processes rely on rigid rules and manual effort, struggling to scale with dynamic, high-volume transactions.

- **Limited Fraud Detection:** Static anomaly detection methods fail to capture evolving fraud patterns and operational inconsistencies.

- **High-Stakes Risks:** Inefficiencies can lead to financial losses, compliance violations, and reputational damage for a global bank like Wells Fargo.

- **Need for AI-Driven Solutions:** Generative AI can enable smarter, automated, and adaptive reconciliation with enhanced anomaly detection.
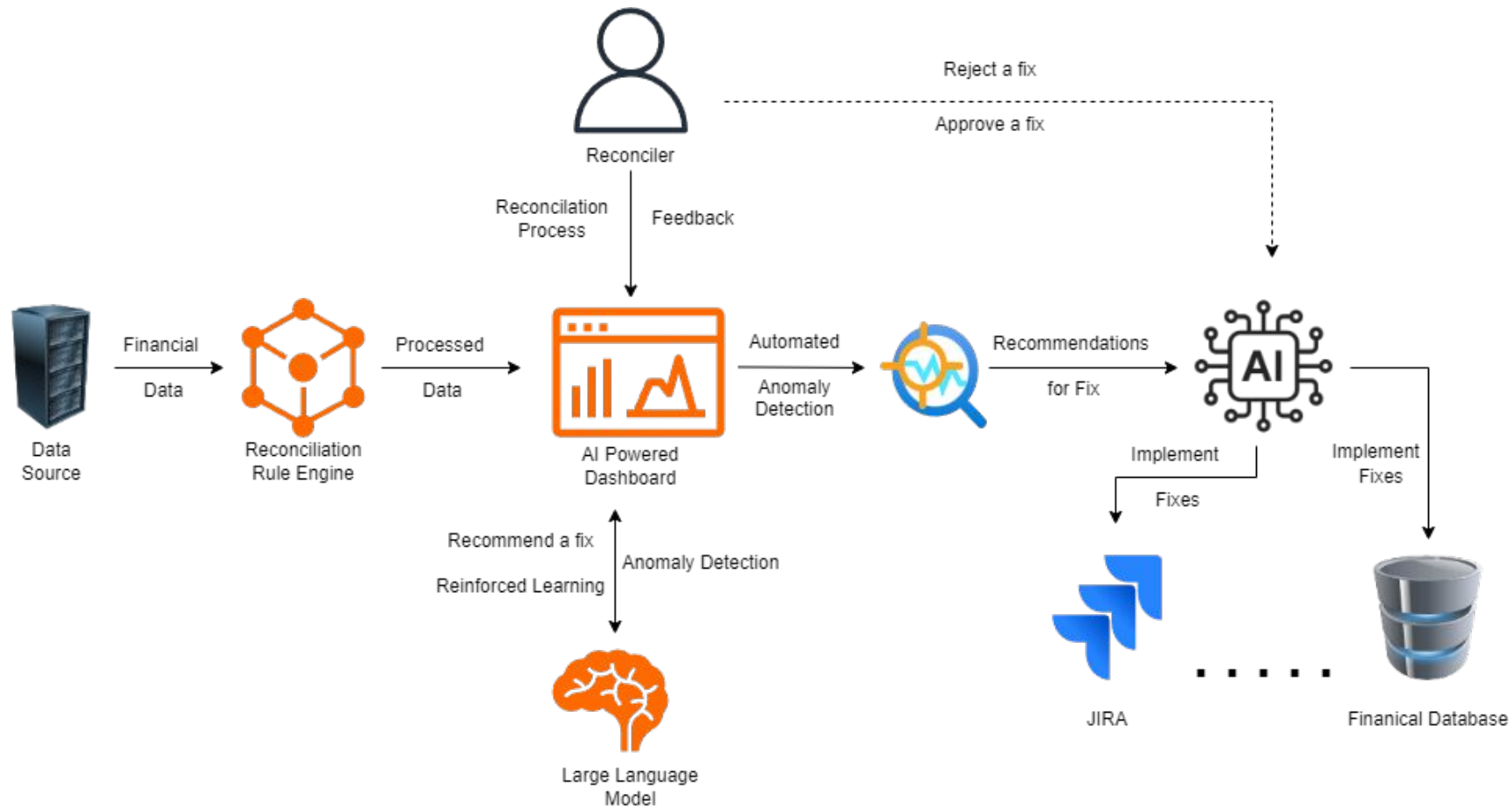
Proposed Solution🚀

- **Automated Break Resolution:** Utilize LLMs (Llama/Mistral) to automatically propose fixes for reconciliation discrepancies.

- **Real-Time Anomaly Detection:** Employ LSTM, and Isolation Forest to instantly flag anomalies with detailed LLM-generated summaries.

- **Human-in-the-Loop Validation:** Enable operators to approve or reject AI-suggested fixes, with feedback loops refining accuracy.

- **Simulated External Integration:** Scalably integrate with systems like JIRA, email, and trade platforms using LangChain for automating the fix.

- **Interactive Dashboard:** Offer a user-friendly interface for reviewing anomalies, diagnosing root causes, and implementing fixes seamlessly.

Current Reconciliation Architecture

Proposed Reconciliation Architecture

Business Impact

1.5M hours
Annual Time Saving for 2000 employees

$34M
Annual Cost Savings for 2000 employees

28K Hours
Weekly Time Saving for 2000 employees

$670K
Weekly Cost Saving for 2000 employees

*Time and cost savings are calculated considering 2000 reconciler employees

Thank You

Appendix

Time Savings Calculation per Employee:

- **Manual Reconciliation Time:** Assuming employees spend 20 hours per week on reconciliation tasks.

- **Time Saved with AI Automation:** 70% of 20 hours = 14 hours per week.

Annual Time Savings for 2,000 Employees:

- **Weekly Time Savings per Employee:** 14 hours.

- **Total Weekly Time Savings:** 14 hours/employee × 2,000 employees = 28,000 hours.

- **Annual Time Savings:** 28,000 hours/week × 52 weeks = 1,456,000 hours.

Cost Savings Calculation:

- **Average Hourly Wage:** Assuming an average wage of $24 per hour.

- **Annual Cost Savings:** 1,456,000 hours × $24/hour = **$34,944,000**.