Technology Hackathon

Smarter Reconciliation and Anomaly Detection using Gen AI

Team Name: BICC_Innovators

Problem Statement

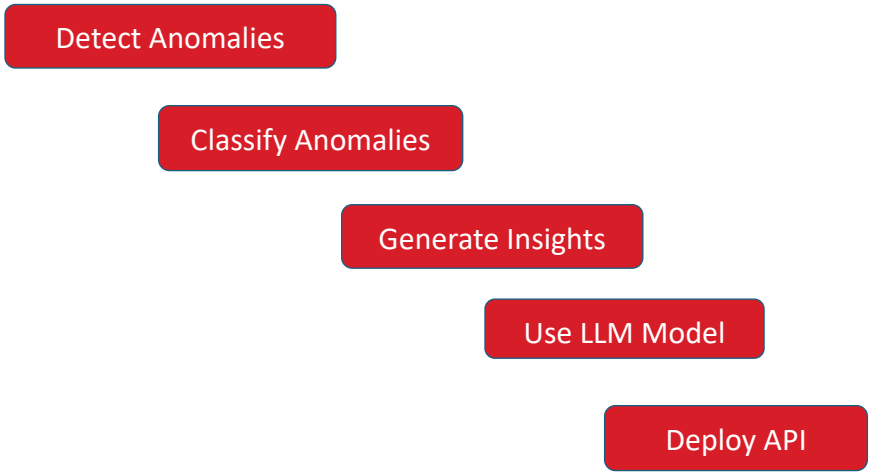
- Manual anomaly detection is time-consuming
- High chances of human errors in financial data reconciliation
- Lack of real-time insights and automated resolution

Proposed Solution

Using GEN AI

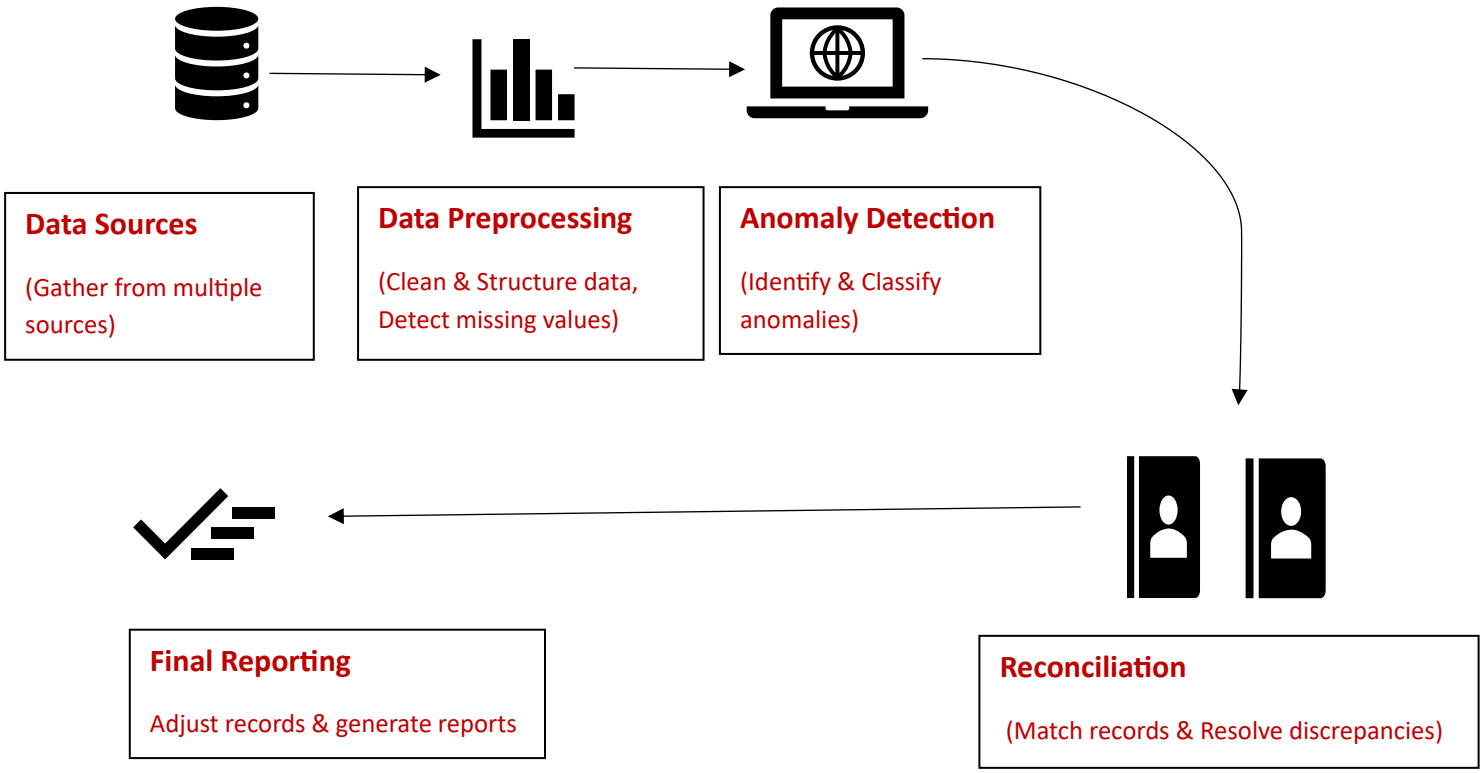
- Automates detection of anomalies in real-time
- Provides insights into root causes of detected anomalies
- Integrates seamlessly with reconciliation tools
- Reduces manual effort and enhances accuracy

Approach



- Detect Anomalies using historical and real-time data
- Classify detected anomalies for categorization
- Generate resolution summaries using AI insights
- Use an LLM model to enhance detection and categorization
- Deploy as an API using Flask for integration

Architecture:



Technologies Used

- ML and GEN AI : Detect anomalies and provides insights potential root causes
- Programming Language: Python
- Frameworks and Libraries: Flask, LangChain, Pandas, Scikit-Learn, Hugging Face
- Dataset: Generated historical and real time reconciliation data

Challenges Faced

- Data Quality Issues: Cleaning and preprocessing historical data
- Real-time Processing: Optimizing models for faster anomaly detection
- Integration Complexity: Ensuring smooth API communication with existing systems

Results & Benefits

- 80% reduction in manual reconciliation time
- Improved accuracy in detecting anomalies
- Faster root cause analysis for financial discrepancies

Future Scope

- Enhance GEN AI models for better accuracy
- Scale the solution for multiple financial processes
- Improve user experience with an intuitive dashboard

Conclusion

- Successfully built an AI-powered reconciliation system
- Automated anomaly detection with Gen AI