

Literature Review On Process Mining In Auditing

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Introduction

Process mining, an innovative data analysis technique, plays a crucial role in auditing by enhancing audit effectiveness through the analysis of event logs to visualize business processes. This study explores how process mining can improve audit effectiveness, identifying key techniques, benefits, and challenges through a thorough literature review.

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Research Questions

Research Question: How can process mining enhance the effectiveness of auditing?

Sub-Question 1: What types of process mining are described in academic literature in the context of auditing, and how do they contribute to audit effectiveness?

Sub-Question 2: What benefits of using process mining techniques in auditing are highlighted in academic literature, and how do they contribute to audit effectiveness?

Sub-Question 3: What challenges and difficulties related to the implementation of process mining in auditing are discussed in academic literature, and how do they impact audit effectiveness?



Methodology

Selection of articles relevant to the topic (n=787)

Scopus (n= 142)
Google Scholar (n= 82)
Science Direct (n= 418)
IEEE Explore (n= 145)

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Selection after removing duplicates (n= 669)

Articles Excluded (n=118)

Selection after abstract and title screening (n= 498)

Articles Excluded (n=171)

Selection after eligibility criteria screening (n= 444)

Articles Excluded (n=54)

Selection after verifying full text availability (n= 265)

Articles Excluded (n=179)

Selection after quality assessment (n=63)

Articles Excluded (n=202)

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Findings

Process Mining Types in Auditing Literature and their Contribution to Audit Effectiveness

- Process Discovery
- Conformance Checking
- Process Enhancement

Benefits of Process Mining Techniques in Auditing and Their Impact on Audit Effectiveness

- Increased Efficiency
- Improved Audit Process Performance
- Enhanced Transparency and Insights
- Enhanced Regulatory Compliance
- Enhance Risk Assessment and Management
- Enhanced Fraud Detection and Prevention
- Enhanced Financial Analysis
- Cost Reduction
- Support for Continuous Auditing

Challenges in Implementing Process Mining in Auditing and Their Impact on Audit Effectiveness

- Data Quality and Availability
- Privacy and Security Concerns
- Handling Unstructured Processes
- Complexity of Real-Life Processes
- Handling Noise and Anomalies
- Log Extraction and Transformation
- Technical Expertise
- Integration with Existing Systems

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Conclusion

Our study explored the dynamic interaction between process mining and auditing, highlighting types, advantages, and challenges. The findings reveal process mining's potential to improve audit transparency, risk assessment, and insights from event logs. Addressing these challenges is essential to fully leverage the benefits of process mining, thereby enhancing audit effectiveness and fostering innovation in auditing practice.