MAWA EVENTS

Address: No. 857, Block A2. Leisure Commerce Square - No 9., 46150 Petaling Jaya, Selangor, Malaysia

Phone: +601116373203 | **Email:** info@mawaevents.net

PROCESS MINING IN HEALTHCARE

"Unlocking Operational Efficiency and Clinical Insights through Data-Driven Process Discovery"

Schedule

Date	Venue	Fees
22 – 26 Jun 2026	Dubai, UAE	USD 3495 per delegate

► **Available delivery methods:** Face-to-Face & Online Training

Introduction

Healthcare organizations are under continuous pressure to improve quality, reduce waste, and streamline patient pathways—all while maintaining compliance and safety. Traditional process improvement methods often rely on manual observation and subjective inputs. Process mining offers a revolutionary, data-driven approach to visualize, analyze, and enhance clinical and operational processes.

This course provides healthcare professionals with a comprehensive foundation in applying process mining to patient flows, billing cycles, diagnostics, treatment delays, and resource management. Using real-world case studies and hands-on tools, participants will learn how to turn electronic health record (EHR) logs and hospital IT data into actionable insights.

Objectives

By the end of this course, participants will be able to:

- Understand the fundamentals of process mining and its application in healthcare
- Extract, clean, and prepare event log data from hospital systems (EHR, HIS, LIS)
- Discover actual clinical workflows and identify bottlenecks or deviations
- Apply conformance checking and performance analytics
- Use process mining software to support quality improvement, auditing, and patient safety

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Why Attend

- Leverage data to improve operational and clinical decision-making
- Uncover hidden inefficiencies and variation in care delivery
- Gain practical experience with process mining tools and methodologies
- Align clinical workflows with regulatory standards and best practices
- Enhance patient satisfaction and throughput with evidence-based improvements

Target Audience

This program is designed for:

- Hospital Administrators and Process Improvement Teams
- Clinical Operations and Quality Managers
- Healthcare Analysts and Health Informatics Professionals
- IT Specialists in EHR, HIS, and Digital Transformation
- Auditors, Regulators, and Health Data Scientists

Individual Benefits

Key competencies that will be developed include:

- Event log extraction and process mapping from healthcare data
- Workflow discovery and bottleneck detection
- Use of tools like Celonis, Disco, or ProM for healthcare processes
- Performance benchmarking and compliance analysis
- Data-driven thinking for continuous improvement in clinical settings

Organizational Benefits

Upon completing the training course, participants will demonstrate:

- Improved patient pathway visibility and efficiency
- Enhanced compliance with accreditation and clinical protocols
- Reduction of delays, redundancies, and rework in key departments
- Better resource allocation based on actual process data
- Support for digital health initiatives and value-based care transformation

Instructional Methodology

The course follows a blended learning approach combining theory with practice:

- Strategy Briefings – Process mining principles, healthcare case applications
- Case Studies – Hospital use cases in radiology, ED, OR, and patient billing
- Workshops – Log file preparation, model discovery, KPI extraction
- Peer Exchange – Challenges and lessons learned in digital health analysis
- Tools – Celonis, ProM, Disco, EHR log templates, conformance models

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Course Outline

Training Hours: 7:30 AM – 3:30 PM Daily Format: 3–4 Learning Modules | Coffee breaks: 09:30 & 11:15 | Lunch Buffet: 01:00 – 02:00

Day 1: Introduction to Process Mining in Healthcare

- Module 1: Fundamentals of Process Mining (07:30 – 09:30) • Types: discovery, conformance, enhancement
- Module 2: Healthcare Process Challenges and Opportunities (09:45 – 11:15) • Efficiency, variation, complexity in care delivery
- Module 3: Event Logs in EHR and Hospital Systems (11:30 – 01:00) • Timestamps, activities, case IDs in HIS, LIS, RIS
- Module 4: Workshop – Explore Sample Hospital Event Logs (02:00 – 03:30) • Hands-on with sample CSV logs

Day 2: Workflow Discovery and Visualization

- Module 5: Building Process Models from Event Logs (07:30 – 09:30) • Directly-Follows Graphs, Petri nets, BPMN
- Module 6: Tools for Process Mining (09:45 – 11:15) • Using Celonis, Disco, ProM – comparisons and applications
- Module 7: Visualizing Patient Flow and Delays (11:30 – 01:00) • Use cases in ER, labs, outpatient clinics
- Module 8: Workshop – Discover and Visualize a Care Pathway (02:00 – 03:30) • Process model construction from logs

Day 3: Compliance and Performance Analysis

- Module 9: Conformance Checking Techniques (07:30 – 09:30) • Compare actual vs. expected processes
- Module 10: KPI and SLA Performance Metrics (09:45 – 11:15) • Throughput time, frequency, rework, waiting time
- Module 11: Use Cases – Process Deviations in Clinical Workflows (11:30 – 01:00) • Discharge delays, readmissions, missed diagnostics
- Module 12: Workshop – Analyze Compliance and KPIs (02:00 – 03:30) • Generate reports and dashboards

Day 4: Strategic Applications and Improvement Planning

- Module 13: Root Cause Analysis of Process Inefficiencies (07:30 – 09:30) • Correlation and pattern detection in process deviations
- Module 14: Continuous Improvement with Process Mining (09:45 – 11:15) • PDCA, Lean Six Sigma integration
- Module 15: Stakeholder Engagement and Visualization (11:30 – 01:00) • Communicating findings to clinical and admin teams
- Module 16: Workshop – Build an Improvement Proposal (02:00 – 03:30) • Link analysis to action

Day 5: Integration, Governance, and Future Outlook

- Module 17: Embedding Process Mining in Health IT Infrastructure (07:30 – 09:30) • Data pipelines, security, scalability
- Module 18: Ethics, Privacy, and Compliance in Healthcare Data (09:45 – 11:15) • HIPAA, GDPR, anonymization techniques
- Module 19: Trends in AI-Augmented Process Intelligence (11:30 – 01:00) • Combining process mining with ML and predictive analytics
- Module 20: Final Simulation – Process Mining for Hospital Efficiency (02:00 – 03:30) • Group project and presentation

Certification

Participants will receive a Certificate of Completion in Process Mining in Healthcare, validating their expertise in using process mining tools and methodologies to drive data-informed operational improvements in healthcare environments.

Why Choose MAWA Events

- **Global Expertise:** More than 17 years of experience in professional training and consulting.
- **Industry-Leading Faculty:** Courses delivered by seasoned professionals with hands-on experience.
- **Practical Insights:** Learn to turn theory into actionable strategies for real-world business impact.
- **Client-Focused Solutions:** Customized programs designed to achieve your organisation’s unique goals.

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