MERCURY

AI in Insurance Operations: Transforming Claims, Approvals, Fraud Detection, & Coding Intelligence

30 August – 3 September 2027
Rome (Italy)



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Ref: 121211_1022999 **Date:** 30 August – 3 September 2027 **Location:** Rome (Italy) **Fees:** 7200 Euro

Introduction:

This advanced training program explores the transformative role of Artificial Intelligence AI in modern insurance operations. AI is no longer just a technological tool—it is reshaping how insurers underwrite risk, manage claims, detect fraud, and optimize coding processes. By integrating AI, insurance organizations can improve efficiency, reduce operational costs, enhance accuracy, and deliver superior customer experiences while maintaining regulatory compliance and ethical standards.

Participants in this course will gain a deep understanding of AI applications across the insurance value chain, from predictive modeling and automation to intelligent decision support and product innovation. Through practical frameworks, case studies, and hands-on strategies, participants will learn to leverage AI for operational excellence, risk management, and strategic growth.

Targeted Groups:

- Senior claims and underwriting professionals seeking AI-driven optimization.
- Insurance operations managers and business analysts.
- Fraud detection, compliance, and risk management officers.
- AI, data science, and IT specialists in insurance companies.
- Strategy, innovation, and product development leaders in the insurance sector.
- Actuarial and pricing professionals aiming to integrate AI into decision-making.
- Customer experience and digital transformation managers.

Training Course Objectives:

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

- Understand how AI is transforming core insurance operations.
- Design and implement AI models for claims prediction, underwriting, and fraud detection.
- Apply machine learning, NLP, computer vision, and automation to streamline workflows.
- Integrate AI insights into pricing, risk assessment, and actuarial modeling.
- Develop frameworks for ethical, transparent, and explainable AI adoption.
- Navigate regulatory, compliance, and governance requirements for AI in insurance.
- Leverage AI to enhance customer experience, operational efficiency, and market reach.
- Prepare the workforce and organization for AI-driven transformation.

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Targeted Competencies:

- Strategic and operational application of AI in insurance.
- Analytical thinking and predictive decision-making.
- Fraud detection, risk intelligence, and compliance management.
- Integration of AI with actuarial, underwriting, and pricing models.
- Product and service innovation through AI-enabled ecosystems.
- Ethical AI governance, transparency, and regulatory compliance.
- Collaboration between technical, operational, and actuarial teams.
- Change management and workforce upskilling for AI adoption.

Course Content:

Unit 1: AI Foundations & Risk Transformation:

- Overview of AI technologies in insurance: ML, NLP, computer vision, RPA.
- Understanding insurance data ecosystems: sources, quality, and integration.
- How digital transformation reshapes risk and actuarial models.
- Incorporating AI-generated data into pricing and predictive models.
- Regulatory compliance, ethical data use, and GDPR considerations.
- Case studies of AI-driven transformation in leading global insurers.
- Building an AI roadmap: strategy, implementation, and operational adoption.

Unit 2: AI in Underwriting & Risk Selection:

- Automating policy approvals using predictive and rule-based models.
- Machine learning for risk assessment, pricing optimization, and underwriting decisions.
- Real-time decision engines and integration with legacy systems.
- Using lifestyle, wearable, and telematics data to personalize premiums.
- Embedding ESG metrics in underwriting decisions through AI.
- Balancing automation with human oversight and ethical compliance.
- Practical applications in life, health, and motor insurance underwriting.

Unit 3: AI-Driven Claims Management & Fraud Intelligence:

- Predictive analytics for claims triage, prioritization, and early warning.
- NLP and computer vision for document, image, and data interpretation.
- Automating claims adjudication, settlement, and payment processes.
- AI-driven customer communication: chatbots and virtual assistants.
- Data governance and transparency in AI-based claims decisions.
- Machine learning for fraud detection, anomaly recognition, and network analysis.
- Balancing fraud prevention with customer experience.
- AI applications for climate-related claims and ESG loss identification.

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Unit 4: AI-Enabled Product Innovation & Intelligent Coding:

- AI-driven product innovation: parametric, micro-insurance, and usage-based products.
- Embedded insurance and innovative services integration with retail, travel, fintech, and health platforms.
- Leveraging real-time data for adaptive and continuously priced insurance products.
- AI in medical and regulatory coding: NLP-based diagnosis and procedure classification.
- Minimizing coding errors and improving reimbursement accuracy.
- Integration of AI coding systems with hospital and insurer databases.
- Future trends: autonomous coding and intelligent auditing systems.

Unit 5: AI in Distribution, Workforce & the Future of Insurance:

- Next-generation distribution channels: chatbots, robo-advisors, and recommendation engines.
- Data-driven offer personalization and proactive risk alerts.
- Expanding access to underserved markets through AI-powered digital channels.
- Fair marketing practices, informed consent, and accountability in AI-based sales.
- Impact of AI on underwriting, claims, and actuarial roles.
- Upskilling and reskilling insurance professionals for AI adoption.
- Managing organizational change and digital readiness.
- Governance frameworks for ethical and transparent AI deployment.