Advanced InsurTech and Data Science Applications Training

Professional Development Training Course Outline

Category	Insurance	**Duration**	5 Days
Base Fee	$1,500 USD	**Delivery Mode**	Online / On-site Hybrid

Course Introduction

The rapid evolution of technology has fundamentally transformed the insurance industry, leading to the rise of InsurTech, a blend of insurance and technology that is reshaping risk assessment, underwriting, claims processing, and customer engagement. With data science playing a critical role, organizations must now harness predictive analytics, machine learning, and automation to make data-driven decisions that drive operational efficiency and customer satisfaction. This course empowers professionals with practical skills in advanced InsurTech tools, data modeling techniques, and artificial intelligence applications tailored for the modern insurance ecosystem.

Training Course on Advanced InsurTech & Data Science Applications is designed to equip participants with hands-on experience in leveraging big data, blockchain, and regulatory technology (RegTech) to enhance insurance product innovation, fraud detection, and customer behavior forecasting. Through real-world case studies, interactive modules, and expert insights, attendees will gain a holistic understanding of how to integrate emerging technologies into insurance workflows, ensuring competitive advantage and compliance with evolving global standards.

Programme Curriculum

Advanced InsurTech and Data Science Applications Training

Introduction

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Course Objectives

1. Understand the fundamentals of InsurTech evolution and its market disruption.
2. Apply predictive analytics to pricing models and risk segmentation.
3. Implement machine learning algorithms for customer personalization.
4. Explore AI-powered underwriting tools to streamline policy issuance.
5. Leverage blockchain for claims transparency and fraud prevention.
6. Utilize IoT (Internet of Things) data in insurance product design.
7. Analyze customer behavior using data visualization dashboards.
8. Apply natural language processing (NLP) in customer service bots.
9. Interpret real-time big data insights for faster claims handling.
10. Ensure compliance using RegTech innovations and risk modeling.
11. Integrate cloud-based solutions for data storage and processing.
12. Develop skills in API-driven insurance ecosystems and partnerships.
13. Design and deploy digital insurance products using agile methodologies.

Target Audiences

1. Insurance Analysts
2. Data Scientists
3. Risk Managers
4. Claims Adjusters
5. Underwriting Professionals
6. Insurance Executives
7. Regulatory Compliance Officers
8. Technology Consultants in Insurance

Course Duration: 5 days

Course Modules

Module 1: Introduction to InsurTech Landscape

- History and evolution of InsurTech
- Key global trends and disruptions
- Ecosystem players and business models
- Investment trends and startup landscapes
- Opportunities and threats in InsurTech
- **Case Study:** Lemonade's disruptive entry into digital insurance

Module 2: Data Science in Insurance

- Role of data science in risk modeling
- Tools for exploratory data analysis
- Feature engineering for insurance datasets

- Building machine learning models
- Model validation and performance metrics
- **Case Study:** Predicting auto insurance claims using Python

Module 3: AI and Machine Learning in Underwriting

- AI underwriting frameworks
- Automating underwriting decision-making
- Image and document recognition
- Risk scoring algorithms
- Ethical considerations in AI use
- **Case Study:** Swiss Re's automated underwriting platform

Module 4: Claims Processing with Technology

- Digital claims submission processes
- Fraud detection through AI
- NLP in claim documentation
- Real-time claim tracking solutions
- Integrating chatbots in claims
- **Case Study:** Progressive’s AI-driven claims management

Module 5: IoT, Telematics, and Insurance

- Connected devices in insurance
- Telematics for usage-based pricing
- Data governance for IoT
- Actuarial applications of IoT data
- Customer experience improvements via IoT
- **Case Study:** Allstate’s Drivewise Program

Module 6: Blockchain and Smart Contracts

- Blockchain fundamentals for insurance
- Transparent claims validation
- Smart contract automation
- Reducing fraud through decentralization
- Data privacy in blockchain
- **Case Study:** B3i’s blockchain solution for reinsurance

Module 7: RegTech and Compliance Automation

- Introduction to RegTech for insurers
- KYC (Know Your Customer) processes
- Real-time regulatory reporting tools
- Risk mitigation through automation
- AML (Anti-Money Laundering) use cases
- **Case Study:** AIG’s adoption of RegTech for global compliance

Module 8: Future Trends & Digital Product Innovation

- InsurTech 2.0 and 3.0 evolution
- Embedded insurance models
- API ecosystems for product distribution
- Agile development in digital products
- Building MVPs (Minimum Viable Products)

- **Case Study:** Trov's on-demand insurance platform

Training Methodology

- Interactive lectures and presentations
- Real-world case studies and group discussions
- Hands-on coding workshops and demos
- Cloud-based simulation environments
- Knowledge checks, quizzes, and assessments
- Capstone project integrating InsurTech and data science

Register as a group from 3 participants for a Discount

Send us an email: info@fineskilltrainingcenter.org or call *+254769199797*

Certification

Upon successful completion of this training, participants will be issued with a globally- recognized certificate.

Tailor-Made Course

We also offer tailor-made courses based on your needs.

Key Notes

a. The participant must be conversant with English.

b. Upon completion of training the participant will be issued with an Authorized Training Certificate

c. Course duration is flexible and the contents can be modified to fit any number of days.

d. The course fee includes facilitation training materials, 2 coffee breaks, buffet lunch and A Certificate upon successful completion of Training.

e. One-year post-training support Consultation and Coaching provided after the course.

f. Payment should be done at least a week before commence of the training, to Fineskill Training Center account, as indicated in the invoice so as to enable us prepare better for you.

Upcoming Scheduled Sessions

Start Date	End Date	Location	Price
23 Nov 2026	27 Nov 2026	Online	$1,000
23 Nov 2026	27 Nov 2026	Physical	$1,500
23 Nov 2026	27 Nov 2026	Physical	$3,000
23 Nov 2026	27 Nov 2026	Physical	$3,000

Start Date	End Date	Location	Price
23 Nov 2026	27 Nov 2026	Physical	$6,000
23 Nov 2026	27 Nov 2026	Physical	$4,500
23 Nov 2026	27 Nov 2026	Physical	$6,000
23 Nov 2026	27 Nov 2026	Physical	$6,000

Ready to enroll or request a customized program? Book online or contact us:

Register Online Now

Email: info@fineskilltrainingcenter.com | Website: www.fineskilltrainingcenter.com