

## Course: Machine Learning Models for Credit Risk Assessment

### Delivered by:

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Certified Financial Risk Manager with 20+ years of experience in risk and finance management within the banking industry and fintech innovation.



#### Objectives:

- Understand the key concepts of Artificial Intelligence (AI) and Machine Learning (ML) and their relevance to credit risk assessment.
- Identify common Machine Learning models used in credit risk, including models used for credit scoring and default prediction.
- Understand how AI models support credit risk measurement and monitoring in personal and corporate lending.
- Recognize the role of Large Language Models (LLMs) in supporting credit analysis and credit risk documentation.
- Describe the key requirements of the EU AI Act relevant to AI systems used in credit risk and lending decisions.
- Understand the importance of explainability, transparency, and governance in AI models used for credit risk assessment.



#### Skills delivered:

- Understand how Machine Learning models are used in credit scoring and default prediction
- Recognize common AI techniques applied in credit risk analytics
- Identify the regulatory implications of the EU AI Act for AI systems used in lending
- Understand how Large Language Models can support credit risk documentation and reporting
- Interpret AI-generated outputs used in credit risk analysis
- Recognize governance and explainability considerations when AI supports credit decisions



#### Designed for:

- Credit Risk Analysts and Officers
- Risk Management Professionals
- Data Scientists and ML Engineers working in financial services
- Credit Underwriting and Loan Origination Teams
- Compliance and Regulatory Reporting Professionals
- Senior Management and Decision Makers in lending institutions
- Internal Audit Professionals reviewing AI/ML model governance

TOPIC	DURATION
<b>1. Introduction to AI and Regulatory Context</b> <ul style="list-style-type: none"> <li>• Role of AI and ML in credit risk modelling</li> <li>• Regulatory expectations for AI-based credit models</li> <li>• Importance of explainability and governance</li> </ul>	20 min.
<b>2. Overview of Machine Learning Algorithms</b> <ul style="list-style-type: none"> <li>• Logistic regression</li> <li>• Decision trees</li> <li>• Random forests</li> <li>• Gradient boosting models (XGBoost, LightGBM)</li> <li>• Neural networks</li> </ul>	40 min.
<b>3. Credit Default Prediction Models</b> <ul style="list-style-type: none"> <li>• Binary classification models for default prediction</li> <li>• Probability of Default (PD) models for: <ul style="list-style-type: none"> <li>-&gt; loans to individuals</li> <li>-&gt; corporate loans</li> </ul> </li> </ul>	60 min.
<b>4. Feature Engineering and Model Development</b> <ul style="list-style-type: none"> <li>• Feature engineering techniques</li> <li>• Variable selection methods</li> <li>• Handling financial and behavioural variables</li> </ul>	20 min.
<b>5. Model Training and Validation</b> <ul style="list-style-type: none"> <li>• Training, validation and testing datasets</li> <li>• Backtesting methodologies</li> <li>• Models validation</li> </ul>	30 min.
<b>6. Summary and Frequently asked questions</b>	10 min.
<b>TOTAL</b>	<b>3 hours</b>

 **Duration:**  
3 hours (3 CPD Units)

 **Language:**  
English

 **Delivery mode:**  
Pre-Recorded

 **Skills level:**  
Expert