

Course No. 1782

Predictive Analytics for Employee Turnover & Talent Retention Training Course

HR ANALYTICS, DIGITAL HR, TECHNOLOGY & AI
HUMAN RESOURCES & TALENT MANAGEMENT

DURATION

5 Days

DELIVERY

Classroom



Course Overview

Employee turnover can create significant costs, operational disruption, knowledge loss, productivity challenges, and difficulties in maintaining critical capabilities. Predictive analytics enables organizations to move beyond simply reporting historical turnover and instead identify patterns, risk factors, and early warning signals that can support proactive talent retention strategies.

This course provides a practical, business-focused approach to using predictive analytics for employee turnover and talent retention. It enables HR leaders, managers, and workforce professionals to understand how employee data can be transformed into actionable insights that help identify potential retention risks and support targeted interventions.

Participants will explore workforce data, employee behavior patterns, turnover indicators, predictive modeling concepts, risk segmentation, workforce forecasting, and the interpretation of predictive outputs. The course emphasizes practical decision-making rather than advanced programming or data science techniques.

The programme also addresses important considerations when using predictive analytics in Human Resources, including data quality, privacy, fairness, bias, transparency, ethical decision-making, and the appropriate use of human judgment. Participants will learn how to ensure that predictive insights support employees and organizational performance without replacing responsible managerial decision-making.

Through practical exercises, workforce scenarios, and applied workshops, participants will develop a structured approach to identifying turnover risks, prioritizing retention actions, measuring outcomes, and building a sustainable predictive talent retention framework.

Objectives

- By the end of this course, participants will be able to:
- Understand the strategic role of predictive analytics in employee turnover and talent retention.
- Identify the key workforce data required for turnover analysis.
- Analyze historical employee turnover patterns and trends.

- Identify key drivers and indicators associated with employee turnover.
- Distinguish between descriptive, diagnostic, predictive, and prescriptive workforce analytics.
- Interpret employee turnover risk scores and predictive model outputs.
- Segment employees and workforce groups according to retention risk.
- Identify critical talent and positions requiring targeted retention strategies.
- Develop data-driven employee retention interventions.
- Evaluate the effectiveness of retention initiatives using workforce analytics.
- Identify data quality, privacy, bias, and ethical risks in predictive HR analytics.
- Establish appropriate human oversight for predictive workforce decisions.
- Develop workforce KPIs and dashboards for monitoring turnover and retention.
- Align predictive talent analytics with organizational workforce strategy.
- Build an actionable predictive analytics framework for sustainable talent retention.

Who Should Attend

This course is designed for HR directors, Human Resources managers, Talent Management leaders, Workforce Planning professionals, Employee Experience managers, Recruitment and Talent Acquisition leaders, Learning and Development professionals, and managers responsible for employee retention and workforce performance.

It is also suitable for People Analytics professionals, HR analysts, Organizational Development specialists, HR transformation teams, data and analytics professionals, business analysts, strategic planning professionals, and senior managers who use workforce information to support organizational decisions.

The programme is particularly relevant to government and public-sector organizations, banks and financial institutions, oil and gas and energy companies, engineering and industrial organizations, telecommunications, healthcare, logistics, and large corporations seeking to reduce unwanted turnover, protect critical talent, and strengthen workforce sustainability.

Learning Outcomes

- By the end of this course, participants will be able to:
- Explain the principles of predictive analytics for employee turnover.
- Identify workforce factors that may contribute to employee attrition.
- Analyze historical turnover data and identify meaningful patterns.
- Define appropriate workforce data requirements for predictive analysis.
- Interpret turnover probabilities, risk indicators, and predictive outputs.
- Identify high-risk employee groups and critical talent segments.
- Distinguish between correlation, indicators, and potential causal factors.
- Develop targeted retention strategies based on workforce insights.
- Prioritize retention interventions according to business impact and workforce risk.
- Monitor changes in turnover risk and workforce behavior over time.
- Measure the effectiveness of employee retention initiatives.
- Identify limitations and potential sources of error in predictive models.
- Recognize privacy, bias, fairness, and ethical considerations in predictive HR analytics.
- Develop management dashboards and KPIs for turnover and retention.
- Build an integrated predictive analytics and talent retention roadmap.

Course Outline

DAY 01

Foundations of Predictive Analytics for Employee Turnover

- Understanding employee turnover and its organizational impact.
- The business cost of employee attrition.
- Strategic importance of talent retention.
- From traditional turnover reporting to predictive workforce analytics.
- Descriptive, diagnostic, predictive, and prescriptive analytics.
- Understanding employee turnover patterns and trends.
- Identifying workforce segments and critical talent populations.
- Key indicators associated with employee turnover.

DAY 01 — CONTINUED

- Defining business questions for predictive turnover analysis.

PRACTICAL APPLICATION

Developing a predictive employee turnover analysis framework.

DAY 02

Workforce Data, Turnover Drivers and Predictive Indicators

- Identifying relevant employee and workforce data.
- Employee demographics, tenure, compensation, performance, mobility, and engagement data.
- Attendance, career progression, training, workload, and organizational factors.
- Data quality and its impact on predictive workforce analysis.
- Identifying meaningful turnover indicators.
- Understanding patterns, relationships, and workforce trends.
- Distinguishing useful signals from misleading indicators.
- Preparing workforce data for predictive analysis.
- Data limitations and interpretation challenges.

PRACTICAL APPLICATION

Analyzing workforce data to identify potential turnover drivers and risk indicators.

DAY 03

Interpreting Predictive Models and Employee Turnover Risk

- Understanding how predictive turnover models work.
- Employee turnover probability and risk scoring.
- Interpreting model outputs for HR and management decisions.
- Employee and workforce risk segmentation.
- Identifying high-risk groups and critical positions.
- Understanding model accuracy, uncertainty, and limitations.
- Avoiding overreliance on predictive scores.

DAY 03 — CONTINUED

- Combining predictive insights with managerial judgment.
- Developing appropriate intervention thresholds.

PRACTICAL APPLICATION

Interpreting a predictive turnover model and prioritizing employee retention risks.

DAY 04

Talent Retention Strategies and Responsible Predictive HR Analytics

- Translating predictive insights into retention strategies.
- Targeted retention interventions and employee engagement.
- Career development and internal mobility strategies.
- Compensation, recognition, learning, and development interventions.
- Managing critical talent and succession risks.
- Measuring the effectiveness of retention initiatives.
- Employee data privacy and responsible use of workforce information.
- Bias, fairness, transparency, and ethical considerations.
- Human oversight and responsible decision-making.

PRACTICAL APPLICATION

Developing a targeted retention strategy based on predictive workforce insights.

DAY 05

Predictive Talent Retention Strategy and Implementation

- Building an enterprise predictive talent retention framework.
- Integrating predictive analytics with workforce planning.
- Developing turnover and retention KPIs.
- Designing management dashboards and early-warning indicators.
- Linking predictive insights to HR strategy and organizational objectives.

DAY 05 — CONTINUED

- Establishing governance for predictive workforce analytics.
- Monitoring outcomes and continuously improving retention strategies.
- Measuring business value and return from talent retention initiatives.
- Scaling predictive analytics across the organization.

FINAL WORKSHOP

Developing an Integrated Predictive Analytics and Employee Retention Roadmap.

Register or Request More Information

Course page: <https://quest-training.com/courses/predictive-analytics-for-employee-turnover-talent-retention-training-course>

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