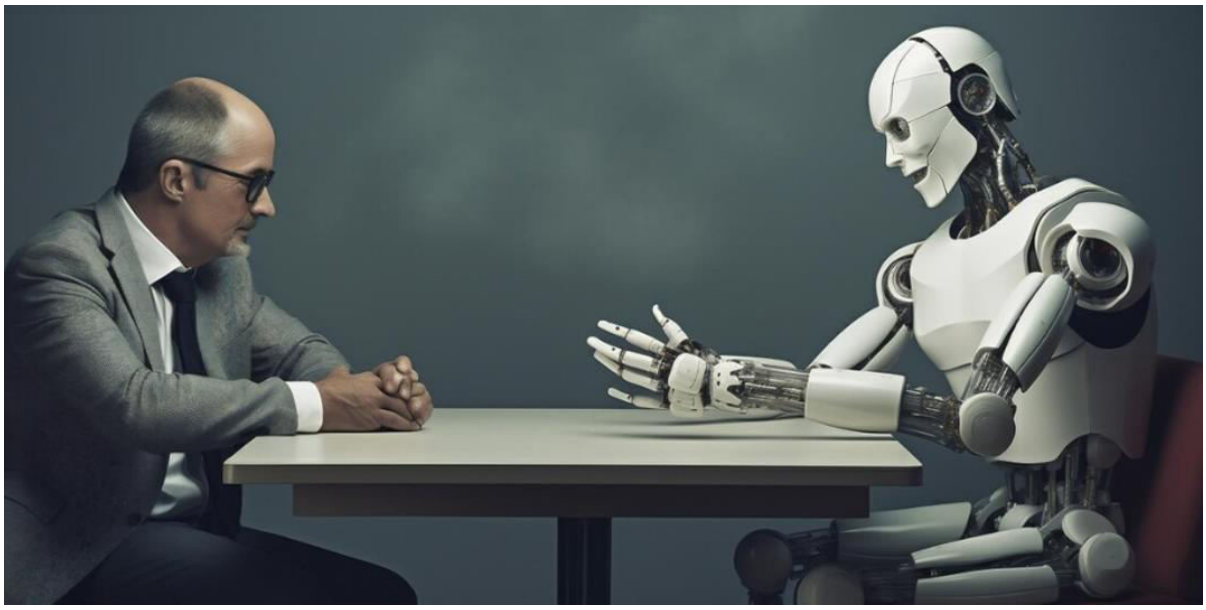

AI FOR HR

Certificate of Completion: AI for HR

Course Code: IT_HM_I_002/25

Duration: 20 Hours (10 sessions × 2 hours each or 5 sessions × 4 hours each)

Delivery Format: Hybrid

Target Audience:

- Graduates / Undergraduates with minimal prior AI experience.

Program Objectives:

- Build a foundational understanding of HR processes and challenges faced by HR professionals.
- Introduce basic concepts of Artificial Intelligence (AI) and Machine Learning (ML) in an approachable manner.
- Demonstrate how AI/ML techniques can be applied to various HR functions (recruitment, workforce planning, employee engagement, retention, etc.).
- Provide hands-on experience with HR-related data sets and use cases that mirror real-world HR scenarios.
- Help learners confidently discuss AI applications in HR and recommend practical solutions to improve HR outcomes.

Detailed Syllabus

Session 1 (2 hours): HR Foundations & Course Overview

Objective: To establish a foundational understanding of core HR processes and introduce the course structure.

Topics:

HR 101

- Key steps: recruiting, onboarding, training, performance management, retention.
- Main objectives: finding the right talent, reducing turnover, improving productivity, ensuring compliance.

Where AI Fits in HR

- What is AI? Simple examples (automated resume screening, sentiment analysis of employee feedback).
- Types of HR problems AI can address (candidate matching, churn prediction, talent development).

Course Roadmap

- What to expect from upcoming sessions.

Activities:

- Activity (15 mins): Brainstorm in small groups: "Which HR challenges seem most ripe for AI solutions?"

Session 2 (2 hours): Data Basics for HR

Objective: To introduce the types of HR data and basic data handling techniques.

Topics:

Common HR Data

- Employee demographics, performance data, attrition records, engagement survey data, training records.

Data Quality & Cleaning

- Identifying missing values, duplicates, inconsistent formats in HR records.

Tools for Demonstration

- Using Excel or Google Sheets for basic data cleaning.

Activities:

- Hands-on Exercise (45 mins): Clean a simple HR dataset - finding and fixing errors (e.g., missing job titles, outlier salary data).

Session 3 (2 hours): Descriptive Analytics & Workforce Analysis

Objective: To learn how to analyze HR data to understand workforce trends and key metrics.

Topics:

Workforce Analytics Fundamentals

- Key metrics: turnover rate, absenteeism, average time to fill roles, diversity metrics.

Dashboard Creation

- Pivot tables, basic charts (bar, line) to visualize HR metrics.

Interpretation of Results

- Spotting trends (e.g., departmental turnover spikes, skill gaps).

Activities:

- Hands-on Exercise (1 hour): Build a basic workforce analysis dashboard from the cleaned HR dataset. Identify trends.

Session 4 (2 hours): Introduction to AI & ML

Objective: To demystify basic AI and Machine Learning concepts relevant to HR.

Topics:

Demystifying AI and Machine Learning

- Simple definitions: supervised vs. unsupervised learning.
- Avoid deep technical detail, focus on concept-level understanding.

Business Context

- AI in finance, marketing, and supply chain - how similar approaches can help HR.

Revisiting HR Examples

- Candidate screening, employee segmentation, performance forecasting.

Activities:

- Discussion Case (30 mins): One HR challenge and how an AI or analytics approach could help (e.g., identifying at-risk employees).

Session 5 (2 hours): Building a Basic Predictive Model

Objective: To provide a foundational understanding of predictive modeling in an HR context.

Topics:

Predictive Modeling Fundamentals

- Concept: train/test split, a simple regression or classification example.

Tool Setup (Beginner-Friendly)

- A free online ML tool for demonstration.

Demo & Hands-on

- Step-by-step building of a small model, e.g., "Predict likelihood of employee attrition based on historical data."

Activities:

- Hands-on Exercise (45 mins): Learners feed a provided HR dataset (with labeled outcomes like "left" vs. "stayed") into a simple predictive tool, generate a churn forecast, and interpret the results.

Session 6 (2 hours): Employee Retention & Realistic Considerations

Objective: To explore how AI can aid in employee retention while considering real-world constraints.

Topics:

Employee Retention Indicators

- Job satisfaction, salary benchmarking, engagement scores, career development.

AI in Turnover Prediction

- Basic anomaly detection or classification methods (kept conceptual).

Real-World Constraints

- Data privacy (especially relevant in HR), organizational buy-in, ROI analysis.

Short Case Study

- Example of a company reducing turnover through data-driven insights.

Activities:

- Activity (30 mins): Scenario: A company sees sudden spikes in attrition among mid-level managers. Learners brainstorm how AI-based analysis could have helped detect or prevent this pattern.

Session 7 (2 hours): Putting It All Together – Capstone Project Introduction

Objective: To introduce the capstone project and guide initial planning.

Topics:

Mini-Project Setup

- Teams form around a simplified HR challenge (e.g., predicting attrition, analyzing training effectiveness, identifying top hiring sources).

Project Expectations

- Use the steps learned so far: data cleaning, descriptive analytics, and a basic predictive approach.

Planning Time

- Teams outline how they'll approach their mini project, what dataset they'll use, and the outcome they aim for.

Assessments:

- Deliverable: Define a "project outline" and implementation of AI in it.

Session 8 (2 hours): Capstone Project Work – Hands-On

Objective: To provide dedicated time for teams to work on their capstone projects.

Topics:

Team Work Time

- Each group cleans or refines their chosen dataset, performs initial analytics.
- Instructor circulates to provide guidance.

Mid-Session Checkpoint

- Teams share early insights or challenges encountered.

Assessments:

- Goal: A draft analysis of the project for presenting.

Session 9 (2 hours): Capstone Project Refinement

Objective: To guide teams in refining their analysis and preparing their final presentations.

Topics:

Dig Deeper

- Teams finalize descriptive analytics, attempt a simple predictive model if appropriate.
- Prepare slides/visuals for final presentation.

Instructor Q&A

- Advice on clarifying findings, linking analysis to real-world ROI or employee engagement improvements.

Assessments:

- Output: Final project submission

Session 10 (2 hours): Presentations, Wrap-Up & Next Steps

Objective: To allow teams to present their projects and to conclude the course with key takeaways and future learning paths.

Topics:

Team Presentations

- Show data analysis approach, key findings, potential ROI or improvement areas.
- Emphasize how the solution could be applied in a real HR setting.

Summary & Q&A

- Recap major takeaways from the entire course.
- Quick discussion: how to continue learning AI for HR.

Learning Objectives:

By the end of this course, learners should be able to:

- Explain core HR processes (recruitment, onboarding, performance management, etc.) and identify common challenges that can be addressed via AI.
- Describe the foundational concepts of AI and basic ML techniques in simple, non-technical terms.
- Understand the data requirements for AI-driven HR (e.g., employee data, performance data, engagement surveys).
- Practice & Implement real industry case studies to see how AI is deployed successfully to optimize HR functions.
- Propose potential AI solutions or improvements in HR scenarios, showing an awareness of best practices, ROI considerations, and ethical aspects.

Teaching Methodology:

- Engaging Lectures: Introduce key AI/HR concepts briefly, followed by real-world examples.

- Hands-On Emphasis: Frequent practice with data cleaning, descriptive analytics, and a single predictive method.
- Group Projects: Fosters teamwork, problem-solving, and communication skills.
- Real-World Orientation: Simple case studies and final project connect classroom learning to practical HR scenarios.

Assessment & Retention:

- Quizzes: Quick check-ins to reinforce key points (data cleaning steps, HR metrics, AI basics).
- Hands-On Exercises: Evaluate how well learners apply the techniques (e.g., building an HR dashboard, cleaning a dataset).
- Capstone Project: Demonstrates learners' ability to perform basic AI/analytics in an HR context.
- Feedback & Reflection: End-of-session reflections to improve retention and clarify any misconceptions.