KOENIG SOLUTIONS · COURSE OUTLINE

AI in HR: NLP Recruitment & Generative AI Tools

Learn to apply data science, machine learning, NLP and Generative AI tools to recruitment, engagement and retention in HR.

16 Hours	9	41	10
DURATION	MODULES	TOPICS	HANDS-ON ACTIVITIES

COURSE OVERVIEW

This course is designed for HR professionals eager to embrace the power of Artificial Intelligence without the need for programming expertise. It provides a comprehensive journey through the transformative role of AI in HR, starting from foundational concepts to practical applications. Participants will explore data science, machine learning, and deep learning within the HR context, gain hands-on exposure to tools like Excel-based ML models and prompt engineering, and understand how technologies like NLP, Generative AI, and RPA can enhance recruitment, engagement, and employee retention. The course also addresses ethical challenges, emphasizes data fairness, and prepares learners for emerging trends like AR/VR in HR. With a strong focus on real-world scenarios, demonstrations, and interactive activities, it equips HR professionals to become strategic drivers of innovation in their organizations.

WHO THIS COURSE IS FOR

- **HR Professionals**
- **Recruitment Specialists**
- **Talent Acquisition Managers**
- **HR Analysts**
- **Employee Engagement Managers**

PREREQUISITES

- HR professionals who are willing to explore the world of AI.
- No prior programming language knowledge is required.

LEARNING OBJECTIVES

- Explain the role of data science and AI in HR functions
- Identify machine learning applications in recruitment and retention
- Build machine learning models in Excel for HR data
- Describe deep learning and neural network concepts for HR
- Apply NLP techniques to recruitment and employee engagement
- Use Generative AI tools and prompt engineering for HR content
- Assess RPA applications for onboarding and payroll processing
- Evaluate ethical challenges of bias, fairness and transparency in AI

COURSE SYLLABUS

9 Modules, 41 Topics

01

Introduction to AI in HR

TOPICS

- **Purpose of the Overview:** “Why HR Needs to Embrace Technology” & Importance for HR Professionals: “Transforming HR with Data Science and AI”

02

Activity

Unlocking HR Potential with Data Science

TOPICS

- What is Data Science?
- **Definition and Key Concepts:** Data Science involves extracting insights from data using various techniques like statistics, machine learning, and data mining
- Life Cycle of Data Science Project (explanation of each step including real examples)

APPLICATIONS IN HR:

- **Employee Analytics:** Analyzing employee data to improve retention and performance
- **Predictive Modeling:** Forecasting future trends in hiring, turnover, and employee satisfaction
- **Workforce Planning:** Optimizing workforce size and composition based on data-driven insights

03

Activity

Machine Learning (ML)

TOPICS

- **Overview of Machine Learning:** Definition, Types of ML, Scenarios where can use particular ML Type

KEY ALGORITHMS AND THEIR APPLICATIONS IN HR:

- **Recruitment:** Using ML algorithms to match candidates with job openings
- **Performance Evaluation:** Analyzing performance data to identify top performers and areas for improvement
- **Employee Retention:** Predicting which employees are at risk of leaving and implementing strategies to retain them
- Applications in Other Domains

04

Activity

Machine Learning (ML)

TOPICS

- **Definition and Types:** Narrow AI (specific tasks), General AI (human-like intelligence), and Superintelligent AI (surpassing human intelligence)
- Introduction to Neural Network and it's types

ROLE OF AI IN HR

- **Automation:** Automating repetitive tasks like resume screening and interview scheduling
- **Decision Support:** Enhancing decision-making with data-driven insights
- **Employee Experience:** Improving employee engagement through personalized interactions and support
- Applications in Other domain

05

Demo

Natural Language Processing (NLP)

TOPICS

- **Overview of NLP:** Understanding how NLP enables computers to process and analyze human language

KEY APPLICATIONS IN HR:

- **Recruitment:** Automating resume screening and using chatbots for candidate interaction
- **Employee Engagement:** Sentiment analysis of feedback and personalized communication
- **Performance Management:** Text analysis of reviews and automated reporting
- **Training and Development:** Creating training materials and providing virtual assistants
- Applications in Other domain

06

Demonstrations Activity Demonstration Activity

Generative AI

TOPICS

- **Introduction to Generative AI:** Creating new content (text, images, audio) using models like GANs and VAEs, Prompt Engineering

USE CASES IN HR:

- **Content Creation:** Generating job descriptions, training materials, and personalized communication
- **Personalized Employee Engagement:** Creating tailored engagement strategies based on individual preferences
- **Virtual Assistants:** Developing AI-driven chatbots to assist employees with HR-related queries
- Applications in Other domain

07

Case Study

Robotics Process Automation (RPA)

TOPICS

- **Overview of RPA:** Understanding how RPA automates repetitive, rule-based tasks using software robots

KEY APPLICATIONS IN HR:

- **Recruitment:** Automating resume screening and interview scheduling
- **Payroll Processing:** Streamlining payroll calculations and disbursements
- **Employee Onboarding:** Automating the onboarding process, including document verification and training assignments
- Applications in Other domain

08

Activity

Ethical Considerations and Challenges

TOPICS

- **Data Privacy and Security:** Ensuring that employee data is protected and used ethically
- **Bias and Fairness in AI Models:** Addressing potential biases in AI algorithms to ensure fair treatment of all employees
- **Transparency and Accountability:** Maintaining transparency in AI decision-making processes and ensuring accountability

09

Future Trends and Developments

TOPICS

- **Emerging Technologies Impacting HR:** Exploring new technologies like augmented reality (AR) and virtual reality (VR) in training and development
- **Preparing for the Future of Work:** Adapting to changes in the workplace driven by technological advancements
- **Continuous Learning and Development:** Emphasizing the importance of upskilling and reskilling to keep pace with technological changes
- Concluding Remarks & Summary of Key Points

HANDS-ON ACTIVITIES

Practise What You Learn

#	MODULE	ACTIVITY
02	**Unlocking HR Potential with Data Science**	**Activity:** Exploratory Data Analysis
03	**Machine Learning (ML)**	**Activity:** Building ML models in Excel
04	**Machine Learning (ML)**	**Activity:** Building Deep Learning Models (via Graphical User Interface)
05	**Natural Language Processing (NLP)**	**Demo:** Use of NLP
06	**Generative AI**	**Demonstrations:** Different Gen AI Platform & Hugging Face platform Introduction **Activity:** Prompt Engineering **Demonstration:** Copilot in Brief **Activity:** Data Analysis using Generative AI
07	**Robotics Process Automation (RPA)**	**Case Study:** Case Study on RPA
08	**Ethical Considerations and Challenges**	**Activity:** Identifying Fairness & Bias from Generative AI

WHAT IS INCLUDED

Everything You Need to Succeed

- Koenig course material for every module
- Delivery by certified instructors and subject matter experts
- Hands-on exercises throughout the course
- Course completion certificate from Koenig

ABOUT KOENIG

Who We Are

Established in 1993, Koenig Solutions is a globally recognised training provider with 35+ technology partnerships, 5,000+ training programmes and a network of certified instructors and subject matter experts, supporting individuals and enterprise teams worldwide.

FLEXIBLE DELIVERY

Learn the Way That Suits You

Classroom Training | Live Online Classes (ILO) | Fly-Me-A-Trainer (FMAT) | Flexi (Self-Paced) | 1-on-1 Training

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