AI for Human Resource Management

Duration: 16 hours

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.

Prerequisites

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

Course contents

Module 1: Introduction to AI in HR

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

Module 2: Unlocking HR Potential with Data Science

- 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
- Activity on Exploratory Data Analysis

Module 3: Machine Learning (ML)

- 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
- **Activity :Building ML models in Excel**

Module 4: Machine Learning (ML)

- 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

Activity: Building Deep Learning Models (via Graphical User Interface)

Module 5: Natural Language Processing (NLP)

- 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
- Demo : Use of NLP

Module 6: Generative AI

- 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
- Demonstrations: Different Gen AI Platform & Hugging Face platform Introduction
- Activity: Prompt Engineering
- Demonstration: Copilot in Brief
- Activity: Data Analysis using Generative AI

Module 7: Robotics Process Automation (RPA)

- 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
- Case Study on RPA

Module 8: Ethical Considerations and Challenges

- 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.
- **Activity: Identifying Fairness & Bias from Generative AI**

Module 9: Future Trends and Developments

- 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**