Python for People Analytics Training Course

Professional Development Training Course Outline

Category	Human Resource Management	**Duration**	5 Days
Base Fee	$1,500 USD	**Delivery Mode**	Online / On-site Hybrid

Course Introduction

Python for People Analytics Training Course is designed to equip professionals with the skills and knowledge to harness the power of Python in analyzing and improving workforce data. With an increasing demand for data-driven insights in HR and talent management, this course empowers participants to analyze key metrics, optimize recruitment processes, improve employee engagement, and drive performance using Python. As organizations move towards data-driven decision-making, understanding Python's capabilities in predictive analytics, machine learning, and automation becomes critical in shaping business outcomes and improving HR strategies.

This course leverages Python's flexibility and robust libraries, focusing on practical applications in People Analytics. Participants will gain hands-on experience using Python to analyze employee data, predict turnover rates, create visualizations, and optimize HR functions such as performance appraisals, compensation analysis, and diversity hiring. With its blend of technical instruction and real-world case studies, the course is an ideal opportunity for HR professionals, data analysts, and managers looking to elevate their data skills and make more informed, strategic decisions using Python.

Programme Curriculum

Python for People Analytics Training Course

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Course Duration

5 days

Course Objectives

1. Learn the fundamentals of Python programming for data analytics.
2. Understand Python libraries such as Pandas, NumPy, and Matplotlib for data manipulation and visualization.
3. Apply statistical analysis techniques to HR and people data using Python.
4. Develop predictive models for employee turnover, performance, and other HR-related metrics.
5. Gain hands-on experience in automating routine HR tasks and processes.
6. Integrate external data sources into Python-based analysis.
7. Learn how to clean and preprocess HR data for accurate analysis.
8. Master the use of machine learning algorithms for HR predictions and decision-making.
9. Build advanced dashboards for HR data reporting and visualization.
10. Conduct sentiment analysis on employee feedback and surveys.
11. Optimize workforce planning and resource allocation with Python.
12. Understand data privacy and ethical considerations in People Analytics.
13. Learn how to communicate complex data insights to non-technical HR professionals.

Target Audience

1. HR Professionals looking to leverage data in decision-making.
2. Data Analysts interested in expanding into People Analytics.
3. HR Managers focused on improving workforce performance through data insights.
4. Talent Acquisition Specialists seeking to optimize recruitment strategies.
5. Learning and Development Managers using analytics to improve employee growth.
6. Data Science Enthusiasts eager to explore HR applications.
7. Business Intelligence Professionals wanting to enhance people-related reporting.
8. C-suite Executives looking to integrate data-driven HR decisions into company strategy.

Course Modules

Module 1: Introduction to Python for Data Analytics

- Understanding Python basics and syntax
- Installing Python and essential libraries
- Data types and structures in Python
- Working with Python’s Jupyter Notebooks for analysis
- Case Study: Automating basic data cleaning for employee records

Module 2: Data Collection & Cleaning for People Analytics

- Importing data from multiple sources
- Handling missing data and outliers in HR datasets
- Data transformation and normalization techniques
- Working with dates and times in employee data
- Case Study: Cleaning and preparing recruitment data for analysis

Module 3: Exploratory Data Analysis (EDA) in People Analytics

- Visualizing workforce data with Matplotlib and Seaborn
- Descriptive statistics and correlation analysis
- Identifying trends and patterns in HR data
- Feature selection and reduction for efficient analysis
- Case Study: Analyzing employee performance data to identify key drivers

Module 4: Predictive Modeling in HR

- Introduction to machine learning algorithms (e.g., regression, classification)
- Building predictive models for turnover, promotions, and absenteeism
- Evaluating model performance using accuracy, precision, and recall
- Cross-validation and hyperparameter tuning
- Case Study: Predicting employee churn using machine learning

Module 5: Sentiment Analysis in People Analytics

- Using Natural Language Processing (NLP) in Python
- Analyzing employee feedback and surveys using text mining
- Sentiment analysis using libraries like TextBlob and VADER
- Visualizing sentiment trends in employee surveys
- Case Study: Sentiment analysis of employee engagement surveys

Module 6: HR Dashboards & Reporting with Python

- Building interactive dashboards with Dash and Plotly
- Visualizing key HR metrics
- Customizing reports for different stakeholders
- Automating report generation for HR teams
- Case Study: Creating a dashboard for monitoring employee satisfaction

Module 7: Machine Learning Applications in People Analytics

- Implementing machine learning algorithms for HR decisions
- Creating classification models for predicting promotions or compensation adjustments
- Using clustering techniques for employee segmentation
- Evaluating model effectiveness and interpreting results
- Case Study: Using clustering to improve diversity hiring practices

Module 8: Data Ethics and Privacy in People Analytics

- Understanding the ethical implications of HR data analysis
- Ensuring compliance with data protection laws

- Protecting sensitive employee data in analytics
- Balancing data-driven decisions with human factors
- Case Study: Addressing bias in recruitment models

Training Methodology

This course employs a participatory and hands-on approach to ensure practical learning, including:

- Interactive lectures and presentations.
- Group discussions and brainstorming sessions.
- Hands-on exercises using real-world datasets.
- Role-playing and scenario-based simulations.
- Analysis of case studies to bridge theory and practice.
- Peer-to-peer learning and networking.
- Expert-led Q&A sessions.
- Continuous feedback and personalized guidance.

Register as a group from 3 participants for a Discount

Send us an email: info@fineskilltrainingcenter.org or call *+254769199797*

Certification

Upon successful completion of this training, participants will be issued with a globally- recognized certificate.

Tailor-Made Course

We also offer tailor-made courses based on your needs.

Key Notes

a. The participant must be conversant with English.

b. Upon completion of training the participant will be issued with an Authorized Training Certificate

c. Course duration is flexible and the contents can be modified to fit any number of days.

d. The course fee includes facilitation training materials, 2 coffee breaks, buffet lunch and A Certificate upon successful completion of Training.

e. One-year post-training support Consultation and Coaching provided after the course.

f. Payment should be done at least a week before commence of the training, to Fineskill Training Center account, as indicated in the invoice so as to enable us prepare better for you.

Upcoming Scheduled Sessions

Start Date	End Date	Location	Price
23 Nov 2026	27 Nov 2026	Online	$1,000
23 Nov 2026	27 Nov 2026	Physical	$1,500
23 Nov 2026	27 Nov 2026	Physical	$3,000
23 Nov 2026	27 Nov 2026	Physical	$3,000
23 Nov 2026	27 Nov 2026	Physical	$6,000
23 Nov 2026	27 Nov 2026	Physical	$4,500
23 Nov 2026	27 Nov 2026	Physical	$6,000
23 Nov 2026	27 Nov 2026	Physical	$6,000

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