

# AI for Data Analytics Course Online

Learn how to enhance data analysis with artificial intelligence by using AI tools to handle data collection, preprocessing, analysis, and visualization. This course focuses on practical techniques that allow you to extract insights without extensive programming knowledge.

Group classes in Live Online and onsite training is available for this course. For more information, email [partnerships@vdc.edu](mailto:partnerships@vdc.edu) or visit: <https://vdc.edu/courses/ai-for-data-analytics-course-online>



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## Course Outline

### Introduction to AI in Data Analytics

#### Overview of AI & Data Analytics

- Understanding AI and its applications in data analytics
- Benefits of using AI for data analysis

#### Introduction to AI Tools

Overview of popular AI tools and platforms (e.g. IBM Watson, Google AI, Tableau, Microsoft Azure AI)

### Data Collection & Preparation

#### Data Sources & Collection Methods

- Identifying various data sources
- Using AI tools to collect data from different platforms

#### Data Cleaning & Preprocessing

- Automated data cleaning techniques
- Handling missing data and outliers using AI tools

### Exploratory Data Analysis (EDA)

#### Understanding Your Data

- Using AI tools to generate summary statistics
- Visualizing data distributions and relationships

#### Advanced EDA Techniques

- Automated pattern and trend detection
- AI-driven feature selection and engineering

# Data Visualization

## Creating Visualizations

- Using AI tools to create charts, graphs, and dashboards
- Best practices for data visualization

## Interactive Dashboards

- Building interactive dashboards with AI tools
- Customizing dashboards to meet specific needs

# Predictive Analytics & Modeling

## Introduction to Predictive Modeling

- Understanding regression, classification, and clustering
- Using AI tools to build predictive models

## Model Evaluation & Validation

- Automated model evaluation techniques
- Understanding metrics and performance evaluation

# Application of AI in Various Domains

## Financial Data Analysis

Case studies and applications in financial forecasting

## Marketing Data Analysis

Analyzing customer behavior and market trends

## Healthcare Data Analysis

Applications in patient data analysis and medical research

# Advanced AI Techniques

## Natural Language Processing (NLP)

Using AI for text analysis and sentiment analysis

## Time Series Analysis

Automated time series forecasting with AI tools

# Capstone Project

## Project Planning & Execution

Defining a project scope and objectives

## Applying Learned Skills

Using AI tools to complete a comprehensive data analysis project

## Presentation & Reporting

Presenting findings using AI-generated reports and visualizations