

# Data AI: Data Analytics with Python

## WorkshopPLUS

**Duration:** 3 days | **Focus Area:** Business/IT Alignment **Level:** 300

This course will provide you the knowledge and tools necessary to understand the capabilities and usage of Python for Data Analytics. It shows how to work on end-to-end data science projects including data analysis and visualization by analyzing various datasets and building predictive outcomes using various Python libraries.

It also explains building machine learning model with Python, common machine learning algorithms in Python and executing Python code with Azure Machine Learning, Spark and HDInsight cluster. This workshop is targeted at Analysts, Business Analytics Developers, and Data Engineers.

### OUTCOMES



#### Skills

Gain a comprehensive understanding of the features and capabilities of Python, Microsoft Products with Python and common machine learning algorithms



#### Best Practices

Experience on how to train, evaluate and consume predictive machine learning models on various samples, even on a real life scenario



#### Way Forward

Take what you've learned in the classroom and apply it to resolve real problems at the workplace

### PREREQUISITES

Participants that have existing experience performing business analytics will receive the most value from this course.



#### Recommended Qualifications

- Some basic knowledge of Python
- Some familiarity with machine learning concepts and predictive modelling



#### Hardware Requirements

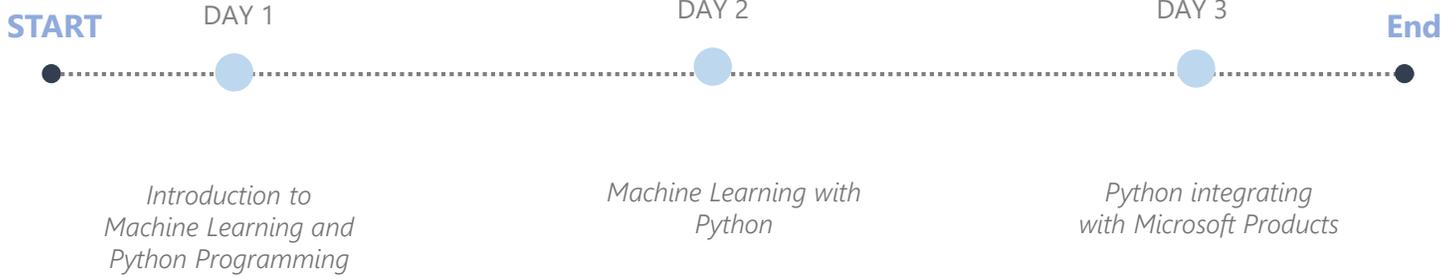
- An Intel Core-i5-based PC
- 4 GB RAM
- 128 GB HDD
- Windows 7 SP1 or later
- Office 2013 Professional Plus
- Internet access with at least 1 Mbps bandwidth per student

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## AGENDA

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Duration: 3 days



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## SYLLABUS

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### Introduction to Machine Learning and Python

- Introduction to Python Installation & IDE Tools
- Overview of Programming Basics with Python
- Most Common & Important Packages in Python

### Machine Learning with Python Machine Learning with Python

- Data Exploration, Analysis and Transformation with Python
- Building Machine Learning Model with Python
- Common Machine Learning Algorithms in Python
- Building E2E Machine Learning Solution with Python

### Python integrating with Microsoft Products

- Executing Python Code with Azure Machine Learning
- Machine Learning Services and Machine Learning Server for Python
- Executing Python Code within Spark and HDInsight

**NEXT STEPS:** If you are interested in building predictive Machine Learning solutions with Python for your organization, contact your Microsoft Account Representative.