

TECHGENX

Data Analytics and Data Sets- Python with Pandas

Please Note: All below course content will be covered in practical scenarios and regular assignments will be shared. All sessions will be recorded and shared with student for future reference (free of cost). Along with below course, around 100+ programs will be shared for self-practice

1. Introduction to Data Analysis with Pandas and Python
2. MacOS - Download the Anaconda Distribution, our Python development environment
3. MacOS - Install Anaconda Distribution
4. MacOS - Access the Terminal Application
5. MacOS - Create conda Environment and Install pandas and Jupyter Notebook
6. MacOS - Unpack Course Materials + The Start and Shutdown Process
7. Windows - Download the Anaconda Distribution
8. Windows - Install Anaconda Distribution
9. Windows - Create conda Environment and Install pandas and Jupyter Notebook
10. Windows - Unpack Course Materials + The Startdown and Shutdown Process
11. Intro to the Jupyter Notebook Interface
12. Cell Types and Cell Modes in Jupyter Notebook
13. Code Cell Execution in Jupyter Notebook
14. Popular Keyboard Shortcuts in Jupyter Notebook
15. Import Libraries into Jupyter Notebook
16. Python Crash Course, Part 1 - Data Types and Variables
17. Python Crash Course, Part 2 - Lists
18. Python Crash Course, Part 3 - Dictionaries
19. Python Crash Course, Part 4 - Operators
20. Python Crash Course, Part 5 - Functions
21. Series
22. Create Jupyter Notebook for the Series Module
23. Create A Series Object from a Python List
24. Create A Series Object from a Python Dictionary
25. Assessment Create a Series Object
26. Intro to Attributes on a Series Object
27. Intro to Methods on a Series Object
28. Parameters and Arguments
29. Create Series from Dataset with the pd.read_csv Method
30. Assessment Import Series with the read_csv Method
31. Use the head and tail Methods to Return Rows from Beginning and End of Dataset
32. Passing pandas Objects to Python Built-In Functions
33. Accessing More Series Attributes
34. Use the sort_values method to sort a Series in ascending or descending order
35. Use the inplace Parameter to permanently mutate a pandas data structure
36. Use the sort_index Method to Sort the Index of a pandas Series object
37. Assessment: The sort_values and sort_index Methods

38. Use Python's in Keyword to Check for Inclusion in Series values or index
39. Extract Series Values by Index Position
40. Extract Series Values by Index Label
41. Assessment: Extract Series Values by Index Position or Index Label
42. Use the get Method to Retrieve a Value for an index label in a Series
43. Math Methods on Series Objects
44. Use the idxmax and idxmin Methods to Find Index of Greatest or Smallest Value
45. Use the value_counts Method to See Counts of Unique Values within a Series
46. Use the apply Method to Invoke a Function on Every Series Values
47. The .map() Method
48. Assessment A Review of the Series Module
49. DataFrames I: Introduction
50. Intro to DataFrames I Module
51. Shared Methods and Attributes between Series and DataFrames
52. Differences between Shared Methods
53. Select One Column from a DataFrame
54. Assessment: Select One Column from a DataFrame
55. Select Two or More Columns from a DataFrame
56. Assessment Select Two or More Columns from a DataFrame
57. Add New Column to DataFrame
58. Broadcasting Operations on DataFrames
59. A Review of the value_counts Method
60. Drop DataFrame Rows with Null Values with the dropna Method
61. Fill in Null DataFrame Values with the fillna Method
62. Convert DataFrame Column Types with the astype Method
63. Sort a DataFrame with the sort_values Method, Part I
64. Sort a DataFrame with the sort_values Method, Part II
65. Assessment: The sort_values Method on a DataFrame
66. Sort DataFrame Index with the sort_index Method
67. Rank Series Values with the rank Method
68. DataFrames II: Filtering Data
69. This Module's Dataset + Memory Optimization
70. Filter a DataFrame Based on A Condition
71. Filter DataFrame with More than One Condition (AND - &)
72. Filter DataFrame with More than One Condition (OR - |)
73. Check for Inclusion with the isin Method
74. Check for Null and Present DataFrame Values with the isnull and notnull Methods
75. Check For Inclusion Within a Range of Values with the between Method
76. Check for Duplicate DataFrame Rows with the duplicated Method
77. Delete Duplicate DataFrame Rows with the drop_duplicates Method
78. Identify and Count Unique Values with the unique and nunique Methods
79. DataFrames III: Data Extraction
80. Intro to the DataFrames III Module + Import Dataset
81. Use the set_index and reset_index methods to define a new DataFrame index
82. Retrieve Rows by Index Label with loc Accessor
83. Retrieve Rows by Index Position with iloc Accessor

84. Passing second arguments to the loc and iloc Accessors
85. Set New Value for a Specific Cell or Cells In a Row
86. Set Multiple Values in a DataFrame
87. Rename Index Labels or Columns in a DataFrame
88. Delete Rows or Columns from a DataFrame
89. Create Random Sample with the .sample() Method
90. Use the nsmallest / nlargest methods to get rows with smallest / largest values.
91. Filter A DataFrame with the where method
92. Filter A DataFrame with the query method
93. A Review of the apply Method on a pandas Series Object
94. Apply a Function to every DataFrame Row with the apply Method
95. Create a Copy of a DataFrame with the copy Method
96. Working with Text Data
97. Intro to the Working with Text Data Section
98. Common String Methods - lower, upper, title, and len
99. Use the str.replace method to replace all occurrences of character with another
100. Filter a DataFrame's Rows with String Methods
101. More DataFrame String Methods - strip, lstrip, and rstrip
102. Invoke String Methods on DataFrame Index and Columns
103. Split Strings by Characters with the str.split Method
104. More Practice with the str.split method on a Series
105. Exploring the expand and n Parameters of the str.split Method
106. MultiIndex
107. Intro to the MultiIndex Module
108. Create a MultiIndex on a DataFrame with the set_index Method
109. Extract Index Level Values with the get_level_values Method
110. Change Index Level Name with the set_names Method
111. The sort_index Method on a MultiIndex DataFrame
112. Extract Rows from a MultiIndex DataFrame
113. The transpose Method on a MultiIndex DataFrame
114. The .swaplevel() Method
115. The .stack() Method
116. The .unstack() Method, Part 1
117. The .unstack() Method, Part 2
118. The .unstack() Method, Part 3
119. The pivot Method
120. Use the pivot_table method to create an aggregate summary of a DataFrame
121. Use the pd.melt method to create a narrow dataset from a wide one
122. The GroupBy Object
123. Intro to the Groupby Module
124. First Operations with groupby Object
125. Retrieve a group from a GroupBy object with the get_group Method
126. Methods on the Groupby Object and DataFrame Columns
127. Grouping by Multiple Columns
128. The .agg() Method
129. Iterating through Groups

130.	Merging, Joining, and Concatenating DataFrames
131.	Intro to the Merging, Joining, and Concatenating Section
132.	The <code>pd.concat</code> Method, Part 1
133.	The <code>pd.concat</code> Method, Part 2
134.	Inner Joins, Part 1
135.	Inner Joins, Part 2
136.	Outer Joins
137.	Left Joins
138.	The <code>left_on</code> and <code>right_on</code> Parameters
139.	Merging by Indexes with the <code>left_index</code> and <code>right_index</code> Parameters
140.	The <code>.join()</code> Method
141.	The <code>pd.merge()</code> Method
142.	Working with Dates and Times in Datasets
143.	Intro to the Working with Dates and Times Module
144.	Review of Python's datetime Module
145.	The pandas Timestamp Object
146.	The pandas DateTimeIndex Object
147.	The <code>pd.to_datetime()</code> Method
148.	Create Range of Dates with the <code>pd.date_range()</code> Method, Part 1
149.	Create Range of Dates with the <code>pd.date_range()</code> Method, Part 2
150.	Create Range of Dates with the <code>pd.date_range()</code> Method, Part 3
151.	The <code>.dt</code> Accessor
152.	Install pandas-datareader Library
153.	Import Financial Data Set with pandas_datareader Library
154.	Selecting Rows from a DataFrame with a DateTimeIndex
155.	Timestamp Object Attributes and Methods
156.	The <code>pd.DateOffset</code> Object
157.	Timeseries Offsets
158.	The Timedelta Object
159.	Timedeltas in a Dataset
160.	Input and Output in pandas
161.	Intro to the Input and Output Section
162.	Pass a URL to the <code>pd.read_csv</code> Method
163.	Quick Object Conversions
164.	Export CSV File with the <code>to_csv</code> Method
165.	Install xlrd and openpyxl Libraries to Read and Write Excel Files
166.	Import Excel File into pandas with the <code>read_excel</code> Method
167.	Export Excel File with the <code>to_excel</code> Method
168.	Assessment Input and Output
169.	Visualization
170.	Intro to Visualization Section
171.	Use the <code>plot</code> Method to Render a Line Chart
172.	Modifying Plot Aesthetics with matplotlib Templates
173.	Creating Bar Graphs to Show Counts
174.	Creating Pie Charts to Represent Proportions
175.	Assessment Visualization

- 176. Options and Settings in pandas
- 177. Introduction to the Options and Settings Module
- 178. Changing pandas Options with Attributes and Dot Syntax
- 179. Changing pandas Options with Methods
- 180. The precision Option