

## DATASCI 410: Main Textbooks

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| <b>Title</b>        | <a href="#">Python Data Science Handbook</a> |
| <b>Author</b>       | Jake VanderPlas                              |
| <b>Publisher</b>    | O'Reilly Media, Inc.                         |
| <b>ISBN</b>         | 9781491912058                                |
| <b>Abbreviation</b> | PSDH   |

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| <b>Title</b>        | <a href="#">Data Science from Scratch, 2nd Edition</a> |
| <b>Author</b>       | Joel Grus  |
| <b>Publisher</b>    | O'Reilly Media, Inc.                                   |
| <b>ISBN</b>         | 9781492041139  |
| <b>Abbreviation</b> | DSS  |

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| <b>Lesson 1: Data Exploration I</b>                          | <a href="#">PDSH Chapter 4 - Visualization with Matplotlib</a><br><a href="#">DSS Chapter 3 - Visualizing Data</a><br><a href="#">DSS Chapter 5 - Describing a Single Set of Data</a>  |
| <b>Lesson 2: Data Exploration II</b>                         | <a href="#">PDSH Chapter 4 - Visualization with Matplotlib</a><br><a href="#">DSS Chapter 10 - Cleaning and Munging</a>  |
| <b>Milestone 1</b>   | <a href="#">PDSH Chapter 4 - Visualization with Matplotlib</a><br><a href="#">DSS Chapter 3 - Visualizing Data</a><br><a href="#">DSS Chapter 5 - Describing a Single Set of Data</a><br><a href="#">DSS Chapter 10 - Cleaning and Munging</a> |
| <b>Lesson 3: Combinatorics and Probability Distributions</b> | <a href="#">PDSH Chapter 4 - Visualization with Matplotlib</a><br><a href="#">DSS Chapter 6 - Probability</a>  |
| <b>Lesson 4: Sample and Hypothesis Testing</b>               | <a href="#">DSS Chapter 7 - Hypothesis and Inference</a>   |
| <b>Lesson 5: Introduction to Bayes Theorem</b>               | <a href="#">DSS Chapter 6 - The Central Limit Theorem</a><br><a href="#">DSS Chapter 6 - Bayes's Theorem</a><br><a href="#">DSS Chapter 7 - Confidence Intervals</a><br><a href="#">DSS Chapter 15 - Digression: The Bootstrap</a>             |
| <b>Milestone 2</b>   | <a href="#">DSS Chapter 3 - Visualizing Data</a><br><a href="#">DSS Chapter 6 - Distributions</a><br><a href="#">DSS Chapter 7 - Hypothesis and Inference</a>  |
| <b>Lesson 6: Intro to Regression</b>                         | <a href="#">PDSH Chapter 4 - Visualization with Matplotlib</a><br><a href="#">DSS Chapter 3 - Visualizing Data</a><br><a href="#">DSS Chapter 14 - Simple Linear Regression</a><br><a href="#">DSS Chapter 15 - Multiple Regression</a>        |

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|  | <a href="#">DSS Chapter 15 - Digression: The Bootstrap</a>   |
| <b>Lesson 7: Regression and Regularization</b> | <a href="#">PDSH Chapter 5 - In Depth: Principal Component Analysis</a><br><a href="#">DSS Chapter 15 - Regularization</a><br><a href="#">DSS Chapter 15 - Multiple Regression</a><br><a href="#">DSS Chapter 15 - Goodness of Fit</a><br><a href="#">DSS Chapter 16 - Logistic Regression</a>   |
| <b>Lesson 8: Times Series Analysis</b>         | <a href="#">PDSH Chapter 3 - Working with Time Series</a>  |
| <b>Milestone 3</b>                             | <a href="#">PDSH Chapter 3 - Working with Time Series</a><br><a href="#">DSS Chapter 14 - Simple Linear Regression</a><br><a href="#">DSS Chapter 15 - Multiple Regression</a><br><a href="#">DSS Chapter 15 - Goodness of Fit</a><br><a href="#">DSS Chapter 15 - Regularization</a><br><a href="#">DSS Chapter 16 - Logistic Regression</a>  |
| <b>Lesson 9: Naïve Bayes</b>                   | <a href="#">PDSH Chapter 5 - In Depth: Naive Bayes Classification</a><br><a href="#">DSS Chapter 13 - Naive Bayes</a>  |
| <b>Lesson 10: Basic Text Analytics</b>         | <a href="#">DSS Chapter 21 - Natural Language Processing</a>   |
| <b>Milestone 4</b>                             | <a href="#">PDSH Chapter 3 - Working with Time Series</a><br><a href="#">PDSH Chapter 5 - In Depth: Naive Bayes Classification</a><br><a href="#">DSS Chapter 14 - Simple Linear Regression</a><br><a href="#">DSS Chapter 15 - Multiple Regression</a><br><a href="#">DSS Chapter 15 - Goodness of Fit</a><br><a href="#">DSS Chapter 15 - Regularization</a><br><a href="#">DSS Chapter 16 - Logistic Regression</a><br><a href="#">DSS Chapter 3 - Working with Time Series</a><br><a href="#">DSS Chapter 13 - Naive Bayes</a> |

## Additional Textbooks

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| <b>Title</b>     | <a href="#">Principles of Data Science - Second Edition</a> |
| <b>Author</b>    | Sunil Kakade, Sinan Ozdemir                                 |
| <b>Publisher</b> | Packt Publishing  |
| <b>ISBN</b>      | 9781789804546   |

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|------------------|--|
| <b>Title</b>     | <a href="#">Python Data Science Essentials - Third Edition</a> |
| <b>Author</b>    | Luca Massaron, Alberto Boschetti                               |
| <b>Publisher</b> | Packt Publishing   |
| <b>ISBN</b>      | 9781789537864  |

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|------------------|---|
| <b>Title</b>     | <a href="#">Mastering pandas - Second Edition</a> |
| <b>Author</b>    | Ashish Kumar                                      |
| <b>Publisher</b> | Packt Publishing                                  |
| <b>ISBN</b>      | 9781789343236                                     |

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|------------------|--|
| <b>Title</b>     | <a href="#">Pandas for Everyone: Python Data Analysis. First Edition</a> |
| <b>Author</b>    | Daniel Y. Chen   |
| <b>Publisher</b> | Addison-Wesley Professional  |
| <b>ISBN</b>      | 9780134547046  |

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| <b>Title</b>     | <a href="#">Hands-On Unsupervised Learning Using Python</a> |
| <b>Author</b>    | Ankur A. Patel  |
| <b>Publisher</b> | O'Reilly Media, Inc.  |
| <b>ISBN</b>      | 9781492035640   |

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| <b>Title</b>     | <a href="#">Matplotlib for Python Developers</a> |
| <b>Author</b>    | Allen Yu, Claire Chung, Aldrin Yim               |
| <b>Publisher</b> | Packt Publishing                                 |
| <b>ISBN</b>      | 9781788625173                                    |

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|------------------|---|
| <b>Title</b>     | <a href="#">Python for Data Analysis. 2nd Edition</a> |
| <b>Author</b>    | Wes McKinney  |
| <b>Publisher</b> | O'Reilly Media, Inc.                                  |
| <b>ISBN</b>      | 9781491957660   |

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|------------------|---|
| <b>Title</b>     | <a href="#">Practical Statistics for Data Scientists. 2nd Edition</a> |
| <b>Author</b>    | Peter Gedeck, Andrew Bruce, Peter Bruce                               |
| <b>Publisher</b> | O'Reilly Media, Inc.  |
| <b>ISBN</b>      | 9781492072942   |

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|------------------|---|
| <b>Title</b>     | <a href="#">Hands-On Data Science and Python Machine Learning</a> |
| <b>Author</b>    | Frank Kane  |
| <b>Publisher</b> | Packt Publishing  |

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|-------------|---------------|
| <b>ISBN</b> | 9781787280748 |
|-------------|---------------|

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| <b>Title</b>     | <a href="#">Machine Learning Quick Reference</a> |
| <b>Author</b>    | Rahul Kumar                                      |
| <b>Publisher</b> | Packt Publishing                                 |
| <b>ISBN</b>      | 9781788830577                                    |

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|------------------|--|
| <b>Title</b>     | <a href="#">Practical Time Series Analysis</a> |
| <b>Author</b>    | Dr. PKS Prakash, Dr. Avishek Pal               |
| <b>Publisher</b> | Packt Publishing                               |
| <b>ISBN</b>      | 9781788290227                                  |

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|------------------|---|
| <b>Title</b>     | <a href="#">Python Machine Learning - Third Edition</a> |
| <b>Author</b>    | Vahid Mirjalili, Sebastian Raschka                      |
| <b>Publisher</b> | Packt Publishing  |
| <b>ISBN</b>      | 9781789955750   |