

## Python for Data Science

- Numpy, Pandas
- Matplotlib, Seaborn
- List Comprehension, Functions, File I/O

### Notes:

<https://www.simplilearn.com/ice9/free-resources-article-thumb/python-for-data-science.pdf>

<https://www.datacamp.com/cheat-sheet/pandas-cheat-sheet-python>

## 2. Statistics & Probability

Descriptive Statistics

Probability distributions (Normal, Binomial)

Hypothesis Testing

Correlation and Regression

### Notes:

<https://towardsdatascience.com/statistics-for-data-science-a-complete-guide-8ef6bfa504b6>

<https://www.khanacademy.org/math/statistics-probability/analyzing-categorical-data>

## **Exploratory Data Analysis (EDA)**

Data Cleaning (missing values, outliers)

Data Transformation

Visualization with Seaborn/Matplotlib

### **Notes:**

<https://www.analyticsvidhya.com/blog/2021/06/exploratory-data-analysis-eda/>

<https://seaborn.pydata.org/examples/index.html>

## **Machine Learning Basics**

Supervised: Linear Regression, Logistic Regression, Decision Trees

Unsupervised: K-Means, PCA

Model Evaluation (Accuracy, Precision, Recall, F1-Score)

### **Notes:**

<https://developers.google.com/machine-learning/crash-course>

[https://www.tutorialspoint.com/machine\\_learning\\_with\\_python/machine\\_learning\\_with\\_python\\_pdf\\_version.htm](https://www.tutorialspoint.com/machine_learning_with_python/machine_learning_with_python_pdf_version.htm)

## **Power BI / Data Visualization Tools**

Creating dashboards

Importing & transforming data

DAX functions

### **Notes:**

[https://learn.microsoft.com/en-us/training/powerplatform/power-bi?WT.mc\\_id=powerbi\\_landingpage-docs-link](https://learn.microsoft.com/en-us/training/powerplatform/power-bi?WT.mc_id=powerbi_landingpage-docs-link)

<https://powerbitips.azurewebsites.net/power-bi-cheat-sheet.html>

## **SQL for Data Science**

SELECT, WHERE, JOIN, GROUP BY

Subqueries & Window Functions

**Notes:**

<https://mode.com/sql-tutorial/>

[https://www.w3schools.com/sql/sql\\_ref.pdf](https://www.w3schools.com/sql/sql_ref.pdf)

Data sets can get in this web - <https://www.kaggle.com/>