# **Artificial Intelligence Training Resources**

# **Certifications & Video Courses:**

# Below are the Courses that you can follow on Udemy in the given order to Learn from python to using it for Data science.

* [**Complete Python Bootcamp: Go from zero to hero**](https://delldigital.udemy.com/complete-python-bootcamp/learn/lecture/3421822#overview)
* [**Python for Data Science and Machine Learning Bootcamp**](https://delldigital.udemy.com/python-for-data-science-and-machine-learning-bootcamp/learn/lecture/5440650#overview)**:**
* [**Latest Version Course**](https://delldigital.udemy.com/the-data-science-course-complete-data-science-bootcamp/learn/lecture/10799982#overview)
* [**Machine Learning, Data Science and Deep Learning**](https://delldigital.udemy.com/data-science-and-machine-learning-with-python-hands-on/learn/lecture/4266554#overview)
* [**Machine Learning A-Z™: Hands-On Python & R**](https://delldigital.udemy.com/machinelearning/learn/lecture/6087180#overview)

# Some More course for Machine learning:

* **Basic Course on Machine learning** -  <https://in.udacity.com/course/intro-to-machine-learning--ud120>
* **Advance Course on Machine learning** - <https://in.udacity.com/course/machine-learning--ud262>
* **Understanding of Basic Algorithms** - <https://classroom.udacity.com/courses/ud262/lessons/313488098/concepts/3131755900923>

# **Reading Material:**

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| **Skill Set** | **Resource Page** |
| **Data Analytics Experience**   * **Basic Statistics** (mean/median/mode/std deviation/ Normal distribution/gaussian distribution etc.) * **Basic Linear algebra** (vectors and spaces, Matrix transformations, inverse functions, finding inverse and determinants, Transpose of a matrix) * **Basic calculus** (Limits and continuity, Derivatives – chain rule, differential equations) * **Basic Probability** (PDF, CDF, ROC Curve, Bayes Theorem etc.) | * <https://www.khanacademy.org/math/linear-algebra> * <https://www.khanacademy.org/#calculus> |
| **Data science / ML-Understanding of techniques & Algorithms**   * Classification (E) * Regression (E) * Clustering (E) * Data Prepration (E) * Neural Network * Association Rules * NLP (Natural Language Processing) * Re-inforcement Learning * Deep Learning | * <https://www.coursera.org/specializations/deep-learning> * <https://developers.google.com/machine-learning/crash-course/> * <https://www-bcf.usc.edu/~gareth/ISL/ISLR%20Seventh%20Printing.pdf> |
| **Big Data / Hadoop** | * <https://www.coursera.org/specializations/big-data> |
| **Programming Language**   * **Python** (Strong Programming Language Any - C/C++/Java) * **R** | * [Python ( Anaconda) Installation](https://conda.io/docs/user-guide/install/windows.html) * [Installation and Usage of Jupyter Notebook](https://www.datacamp.com/community/tutorials/tutorial-jupyter-notebook) * <https://www.rstudio.com/online-learning/> * <https://www.codecademy.com/learn/learn-python-3> |
| **DB**   * **Oracle** * **RDBMS (SQL)** | * <https://www.codecademy.com/learn/learn-sql> |
| * **Google collab experience** | * <https://www.coursera.org/learn/gcp-big-data-ml-fundamentals> |

# **Few Additional References (Topic):**

1. Stats, Data Structure: [link](https://sebastianraschka.com/notebooks/python-notebooks.html)
2. Machine Learning Algorithm: [link](https://github.com/ageron/handson-ml)
3. [Decision Tree](https://github.com/ageron/handson-ml/blob/master/06_decision_trees.ipynb)- Git Hub
4. [Classification](https://github.com/ageron/handson-ml/blob/master/03_classification.ipynb)
5. Jupyter Notebook:  [Tutorial](https://www.datacamp.com/community/tutorials/tutorial-jupyter-notebook)
6. Loading and saving data: [Code](https://github.com/kumarneeraj2005/Demo/tree/master/1-Load%20Data)
7. 10 mins to pandas: [Link](https://pandas.pydata.org/pandas-docs/stable/10min.html)
8. Data Exploration: [Code](https://github.com/kumarneeraj2005/Demo/tree/master/2-DataExplore)
9. Data Visualization: [Code](https://github.com/kumarneeraj2005/Demo/tree/master/3-DataVisualize)
10. Data Preparation: [Code](https://github.com/kumarneeraj2005/Demo/tree/master/4-DataPreparation)
11. [Data Exploration](https://www.analyticsvidhya.com/blog/2016/01/guide-data-exploration/)
12. [Correlation](https://www.surveysystem.com/correlation.htm)
13. [Box-plot](https://www.khanacademy.org/math/statistics-probability/summarizing-quantitative-data/box-whisker-plots/a/box-plot-review)
14. [Scaling](http://datareality.blogspot.in/2016/11/scaling-normalizing-standardizing-which.html)
15. [Decision Tree](https://s3.amazonaws.com/video.udacity-data.com/topher/2017/June/593cda42_id3-algorithm-for-decision-trees/id3-algorithm-for-decision-trees.pdf)
16. Solution of Titanic Sinking in detail using this work: [Jeff Delaney](https://www.kaggle.com/jeffd23/scikit-learn-ml-from-start-to-finish/code)
17. Unsupervised Learning: [Link](https://medium.com/machine-learning-for-humans/unsupervised-learning-f45587588294)
18. K-means & Learning how to learn an algorithm : [Link](https://inside.dell.com/projects/india-dss-mentor-mentee-program-2018/blog/2018/05/22/meeting-3-k-means)