

## **Define Goal : PRODUCTS or ALGORITHMS**

### **1. Maths**

- Linear Algebra (Matrix, Vector)
- Statistics
- Probability

### **2. Learn Python & its Libraries**

- Numpy
- Pandas

### **3. Learn ML Algorithms**

- Supervised vs Unsupervised vs Reinforcement
- Linear Regression, Logistic Regression, Clustering
- KNN (K Nearest Neighbours)
- SVM (Support Vector Machine)
- Decision Trees
- Random Forests
- Overfitting, Underfitting
- Regularization, Gradient Descent, Slope
- Confusion Matrix

### **4. Data Preprocessing (for higher accuracy)**

- Handling Null Values
- Standardization
- Handling Categorical Values
- One-Hot Encoding
- Feature Scaling

### **5. Learn ML libraries**

- Scikit learn
- Matplotlib
- Tensorflow for DL

### **6. Practice, Practice, Practice (Kaggle)**

**\*Explore projects on Github**

**Resources :**

1. <http://www.maths.qmul.ac.uk/~pjc/notes/linalg.pdf> (Maths)
2. <https://www.mathsbox.org.uk/twi/astats.pdf> (Maths)
3. [https://www.youtube.com/playlist?list=PLLy\\_2iUCG87D1CXFxE-SxCFZUiJzQ3IvE](https://www.youtube.com/playlist?list=PLLy_2iUCG87D1CXFxE-SxCFZUiJzQ3IvE) (Maths)
4. <https://developers.google.com/machine-learning/crash-course> (ML by Google)
5. <https://www.datacamp.com/courses/intro-to-python-for-data-science> (Python Basics)
6. <https://www.coursera.org/learn/machine-learning> (Stanford Course by Andrew ng)
7. <https://madewithml.com/>
8. <https://www.javatpoint.com/data-preprocessing-machine-learning> (Data Preprocessing)
9. <https://scikit-learn.org/stable/> (Scikit Learn)
10. <https://www.tensorflow.org/> (Tensorflow)
11. <https://www.kaggle.com/> (Kaggle)