

## 30 Days Data Science To-Do List

### Week 1: Python + Math Basics

Day 1: Install Anaconda, Learn Python basic syntax (variables, loops, if-else)

Day 2: Learn Python functions, lists, dictionaries; practice small exercises

Day 3: Python practice: strings, file reading, exception handling

Day 4: Start Numpy: arrays, operations, indexing

Day 5: Start Pandas: read CSV, explore DataFrame

Day 6: Pandas practice: filtering, grouping, sorting

Day 7: Math Basics: Mean, Median, Mode, Variance, Standard Deviation

### Week 2: Data Analysis + Visualization

Day 8: More Pandas: merging, joining datasets

Day 9: Matplotlib basics: line plots, scatter plots

Day 10: Seaborn basics: beautiful graphs

Day 11: Mini project: Analyze "Iris dataset"

Day 12: Start EDA (Exploratory Data Analysis)

Day 13: Probability Basics: events, independence, Bayes rule

Day 14: Mini project: Create a simple data visualization story

### Week 3: Machine Learning Basics

Day 15: Intro to Machine Learning: Supervised vs Unsupervised

Day 16: Linear Regression: theory + code

Day 17: Logistic Regression: theory + code

Day 18: Decision Trees: introduction

Day 19: K-Nearest Neighbors (KNN): intro + code

Day 20: Mini project: Titanic dataset prediction with Logistic Regression

Day 21: Review and organize notes; push to GitHub

Week 4: Projects + Portfolio

Day 22: Start Kaggle beginner competition (Titanic, House Prices)

Day 23: Continue Kaggle project

Day 24: Learn Model Evaluation: Accuracy, Precision, Recall

Day 25: Basics of Hyperparameter Tuning

Day 26: Finish Kaggle project

Day 27: Learn basic SQL (SELECT, WHERE, JOIN)

Day 28: SQL practice

Day 29: Full review of all learning

Day 30: Create Portfolio (GitHub Repo + README)

Notes:

- Try to code at least 1-2 hours per day.
- Practice > Theory.
- Focus on completing mini-projects.