Absolutely! Here’s a 7-week study guide without SQL, focusing on other data science and machine learning skills.

industry certs.<https://chatgpt.com/share/673bcaa8-a09c-800b-87d7-aaf40ff8be03>

Scipy cheat sheet <https://www.datacamp.com/cheat-sheet/scipy-cheat-sheet-linear-algebra-in-python>

week 2 Linear algebra for data science in python.

week 4 Supervised Learning with scikit-learn, Unsupervised Learning in Python

week 2 Data Wrangling/Visualization (pandas, ggplot)

week 3 machine learning (algorithms, supervised/unsupervised)

week 4 machine learning (with linear algebra)

week 5 intermediate statistics (statistical inference, hypothesis testing)

week 6 algorithms and complexity (algorithmic thinking)

week 7 big data (Spark and Hadoop)

week 1

intermediate statistics

Statistical Thinking in Python (I & II), Introduction to Statistical Modeling in R

week 2

data wrangling

Data Manipulation with pandas, Data Cleaning in Python.

week 3

Data Visualization

Into. Data Vis Matplotlib, Intro Data Vis Seaborn

week 4

Machine Learning Basics

Supervised Learning with scikit-learn, Unsupervised Learning in Python

week 5

Advanced Machine Learning

Deep Learning in Python, Ensemble Methods in Python

week 6

Big Data Fundamentals

Introduction to Shell, Introduction to PySpark

week 7

linear algebra for data science

Linear algebra for data science in python.

week 1

Hypothesis testing, confidence intervals, statistical inference

week 2

handle misssing val, merging, reshaping

week 3

create plots

week 4

Build simple models like regression and k-means.

week 5

Model tuning, cross-validation.

week 6

Work with large datasets using Spark

week 7

Matrix operations, eigenvalues.

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### \*\*Week 1: Intermediate Statistics\*\*

1. \*\*Objective\*\*: Strengthen your understanding of key statistical concepts.

2. \*\*Courses\*\*:

- \*\*"Statistical Thinking in Python (Part 1 & 2)"\*\*

- \*\*"Introduction to Statistical Modeling in R"\*\* (optional if you’re interested in R)

3. \*\*Practice\*\*:

- Focus on exercises related to hypothesis testing, confidence intervals, and statistical inference.

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### \*\*Week 2: Data Wrangling\*\*

1. \*\*Objective\*\*: Master techniques for cleaning and manipulating datasets.

2. \*\*Courses\*\*:

- \*\*"Data Manipulation with pandas"\*\*

- \*\*"Data Cleaning in Python"\*\*

- \*\*"Data Manipulation with dplyr"\*\* (optional for R users)

3. \*\*Practice\*\*:

- Work with messy datasets to practice handling missing values, merging, and reshaping data.

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### \*\*Week 3: Data Visualization\*\*

1. \*\*Objective\*\*: Learn how to create clear and impactful visualizations.

2. \*\*Courses\*\*:

- \*\*"Introduction to Data Visualization with Matplotlib"\*\*

- \*\*"Introduction to Data Visualization with Seaborn"\*\*

- \*\*"Data Visualization with ggplot2"\*\* (optional for R)

3. \*\*Practice\*\*:

- Create a variety of charts (scatter plots, histograms, line charts) and work on presenting findings clearly.

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### \*\*Week 4: Machine Learning Basics\*\*

1. \*\*Objective\*\*: Understand fundamental machine learning algorithms.

2. \*\*Courses\*\*:

- \*\*"Supervised Learning with scikit-learn"\*\*

- \*\*"Unsupervised Learning in Python"\*\*

- \*\*"Machine Learning for Everyone"\*\* (optional introductory overview)

3. \*\*Practice\*\*:

- Implement basic models, like linear regression and k-means clustering, to build an understanding of different learning paradigms.

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### \*\*Week 5: Advanced Machine Learning Techniques\*\*

1. \*\*Objective\*\*: Explore advanced algorithms and techniques in machine learning.

2. \*\*Courses\*\*:

- \*\*"Deep Learning in Python"\*\* (covering the basics of deep learning)

- \*\*"Ensemble Methods in Python"\*\* (exploring random forests and boosting)

3. \*\*Practice\*\*:

- Focus on model tuning and evaluation techniques, such as cross-validation and hyperparameter tuning.

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### \*\*Week 6: Big Data Fundamentals\*\*

1. \*\*Objective\*\*: Get familiar with big data tools and techniques for handling large datasets.

2. \*\*Courses\*\*:

- \*\*"Introduction to Shell"\*\* (for basic command-line data management)

- \*\*"Introduction to PySpark"\*\* (for distributed data processing)

3. \*\*Practice\*\*:

- Explore Spark's DataFrame API with sample large datasets, working on data processing and manipulation.

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### \*\*Week 7: Linear Algebra for Data Science\*\*

1. \*\*Objective\*\*: Strengthen foundational linear algebra skills for data science and machine learning.

2. \*\*Courses\*\*:

- \*\*"Linear Algebra for Data Science in Python"\*\*

- \*\*"Mathematics for Machine Learning"\*\* (supplementary for further math skills)

3. \*\*Practice\*\*:

- Focus on exercises involving matrix operations, eigenvalues, and applications of linear algebra in machine learning.

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### \*\*Supplementary Practice (Throughout the Guide)\*\*

- \*\*DataCamp Projects\*\*: Work on projects to apply concepts in real-world contexts.

- \*\*Practice Mode\*\*: Reinforce key concepts each week with targeted practice exercises.

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This guide should help you build a strong skill set across data science, machine learning, and big data handling using DataCamp’s resources.

\*other STUDY GUIDE

Absolutely! Here’s a structured, free study plan to get you started with machine learning. This plan spans about 12 weeks but can be adjusted according to your pace.

### \*\*Weeks 1-2: Introduction to Machine Learning\*\*

- \*\*Read\*\*: \*"Machine Learning Yearning"\* by Andrew Ng (available for free online).

- \*\*Watch\*\*: Andrew Ng's \*Machine Learning\* course on Coursera (audit for free).

- \*\*Do\*\*: Complete basic exercises and quizzes on Coursera’s platform.

### \*\*Weeks 3-4: Python Programming for Data Science\*\*

- \*\*Read/Watch\*\*: Tutorials on Python for Data Science (e.g., \*“Python for Data Science Handbook”\* by Jake VanderPlas, available on GitHub).

- \*\*Practice\*\*: Solve Python problems on platforms like LeetCode or HackerRank.

- \*\*Do\*\*: Work through Jupyter Notebook exercises from Google Colab or Kaggle.

### \*\*Weeks 5-6: Data Handling and Visualization\*\*

- \*\*Read/Watch\*\*: Tutorials on NumPy, pandas, and Matplotlib/Seaborn.

- \*\*Practice\*\*: Use datasets from Kaggle or UCI Machine Learning Repository to practice data cleaning and visualization.

- \*\*Do\*\*: Complete hands-on projects such as data exploration and visualization tasks.

### \*\*Weeks 7-8: Supervised Learning\*\*

- \*\*Read/Watch\*\*:

- Scikit-learn documentation for supervised learning algorithms.

- \*“Hands-On Machine Learning with Scikit-Learn, Keras, and TensorFlow”\* by Aurélien Géron (first chapters free online).

- \*\*Practice\*\*: Implement algorithms like Linear Regression, Decision Trees, and SVMs on sample datasets.

- \*\*Do\*\*: Complete machine learning projects on Kaggle (e.g., Titanic, House Prices).

### \*\*Weeks 9-10: Unsupervised Learning and Model Evaluation\*\*

- \*\*Read/Watch\*\*:

- Tutorials on clustering (e.g., K-Means) and dimensionality reduction (e.g., PCA).

- Learn about model evaluation metrics and cross-validation techniques.

- \*\*Practice\*\*: Apply clustering and dimensionality reduction techniques to datasets.

- \*\*Do\*\*: Evaluate models on Kaggle or similar platforms and participate in Kaggle competitions.

### \*\*Weeks 11-12: Deep Learning Basics\*\*

- \*\*Read/Watch\*\*:

- \*“Deep Learning”\* by Ian Goodfellow (available for free online as draft).

- \*Deep Learning Specialization\* by Andrew Ng on Coursera (audit for free).

- \*\*Practice\*\*: Use TensorFlow or PyTorch to implement basic neural networks.

- \*\*Do\*\*: Work on simple deep learning projects like image classification using pre-trained models.

### \*\*Additional Tips:\*\*

- \*\*Join Communities\*\*: Participate in forums like Stack Overflow, Reddit’s r/MachineLearning, and specialized LinkedIn groups.

- \*\*Follow Blogs and News\*\*: Read blogs like Towards Data Science or Medium’s AI section for the latest trends and techniques.

- \*\*GitHub Projects\*\*: Explore and contribute to open-source machine learning projects to gain practical experience.

### \*\*Ongoing Learning:\*\*

- \*\*Stay Updated\*\*: Follow recent research papers and attend online webinars or meetups.

- \*\*Iterate and Improve\*\*: Regularly revisit concepts and projects to refine your skills and knowledge.

This plan provides a solid foundation in machine learning, leveraging free resources and hands-on projects to build practical skills. Good luck with your learning journey!