

# **How To Learn Python For Data Science**

# 1. Basic Syntax

Writing Basic Programs

Operators (Arithmetic, Relational, Logical, Membership)

If - else statements

Loops(Specially For loops, Nested Loops)

Functions

Estimated Time - 2-3 Days

# Data Types

Lists

Strings

Dictionary

Working with Dates

Estimated Time - 2-3 Days

# Bit of Functional Programming

Lambda Functions

Map, Filter and Reduce

Higher Order Functions

Estimated Time - 1 Day

# Advance Concepts

File Handling

Exception Handling

Regular Expressions

Estimated Time - 2-3 Days

# Good to haves

Basic Understanding of OOP

Flask

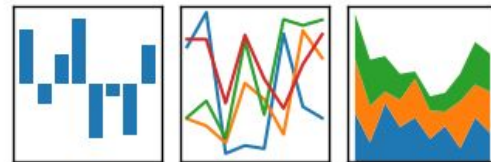
Experience with external Libraries(installing and using)

Estimated Time - 7 Days

# External Libraries



pandas  
 $y_{it} = \beta' x_{it} + \mu_i + \epsilon_{it}$



Estimated Time - 2+5 Days

# Understand How To Represent Data

Real World Data

Text, Images and Videos

Working with Data Formats like CSV and JSON

Estimated Time - 2 Days



# The Big Questions

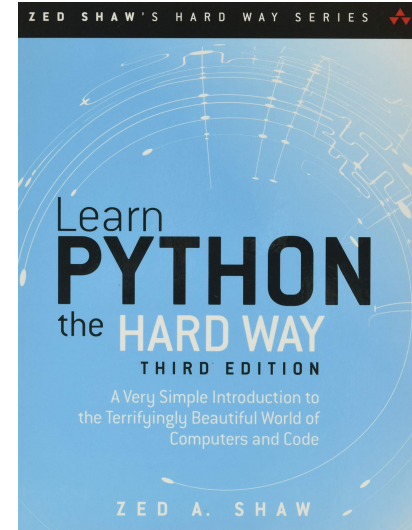
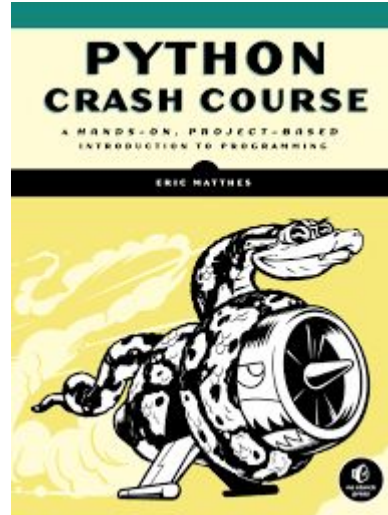
Do we need to learn Data Structures and Algorithms?

Do we need to dive deep?

# Learning Resources

Official Python Docs

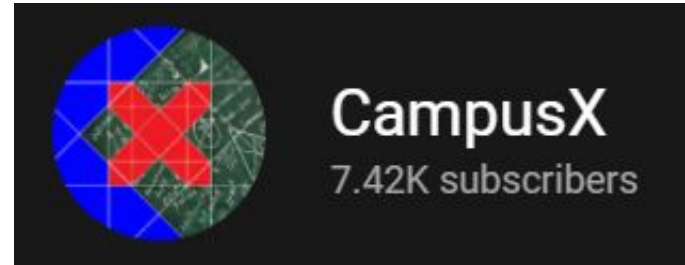
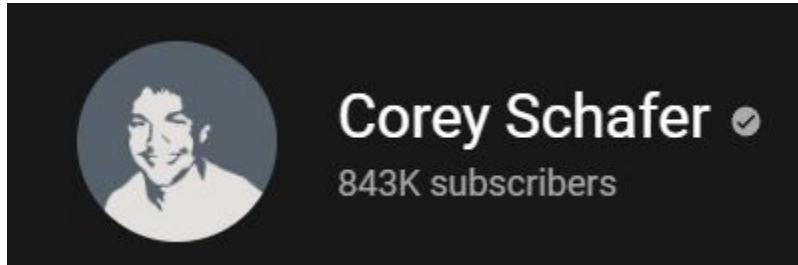
Books:



# Learning Resources

Website - [www.programiz.com](http://www.programiz.com)

YouTube Channels -



# My Advise

Learn by doing

Don't try to follow entire syllabus

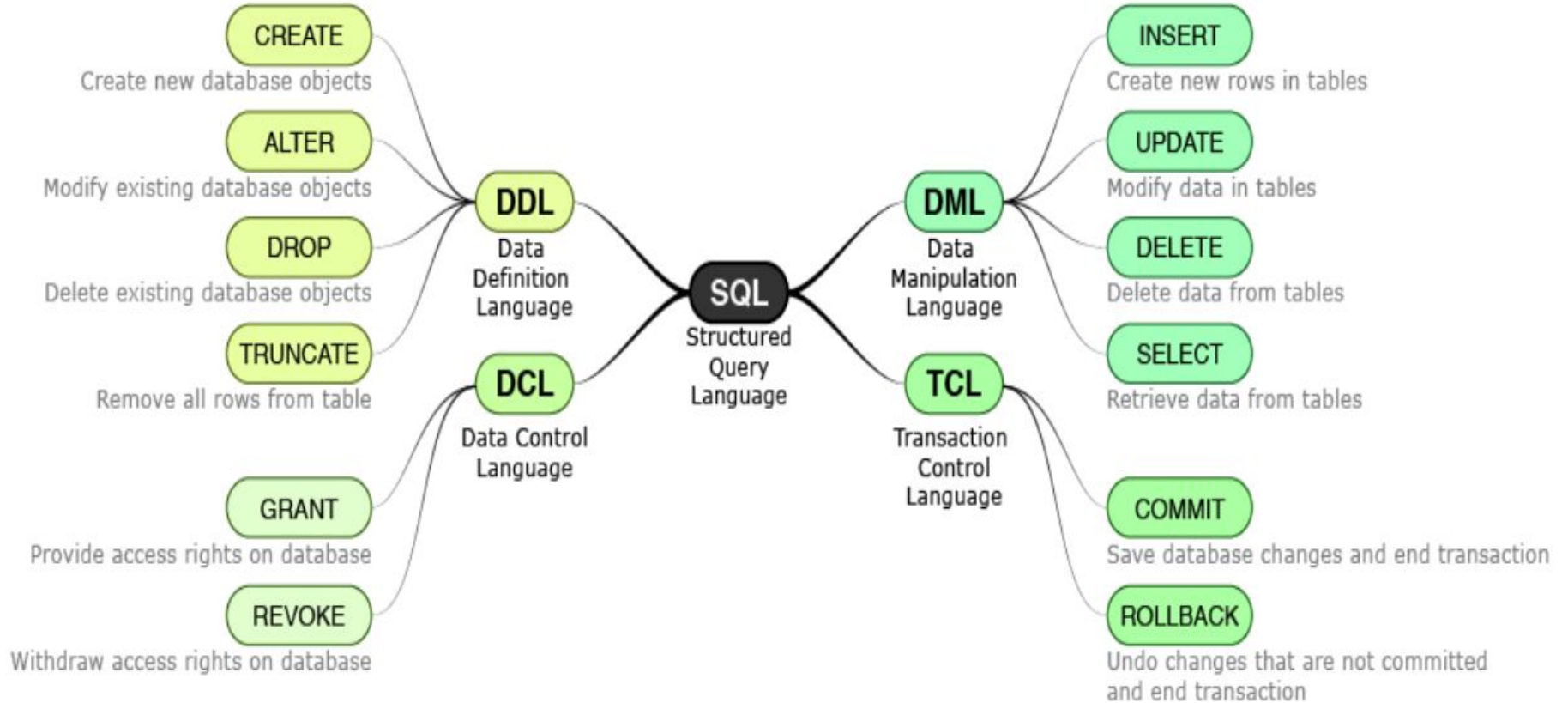
# **How To Learn SQL For Data Science**

# What is SQL

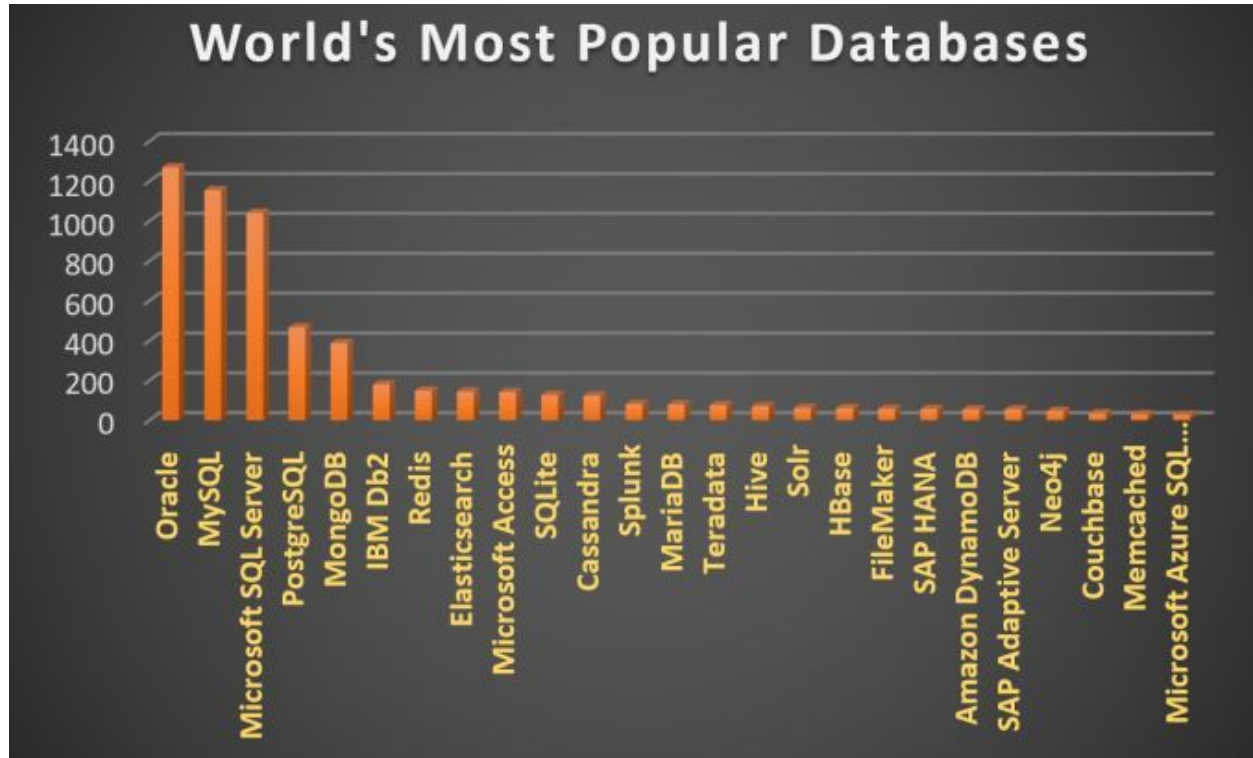
## Structured Query Language

SQL is designed for managing data in a relational database management system (RDBMS). SQL is a database language, it is used for database creation, deletion, fetching rows, and modifying rows, etc.

# What is SQL



# Why is SQL so important?



Cloud  
Technologies

Big Data  
Technologies



# Why is SQL important in Data Science?

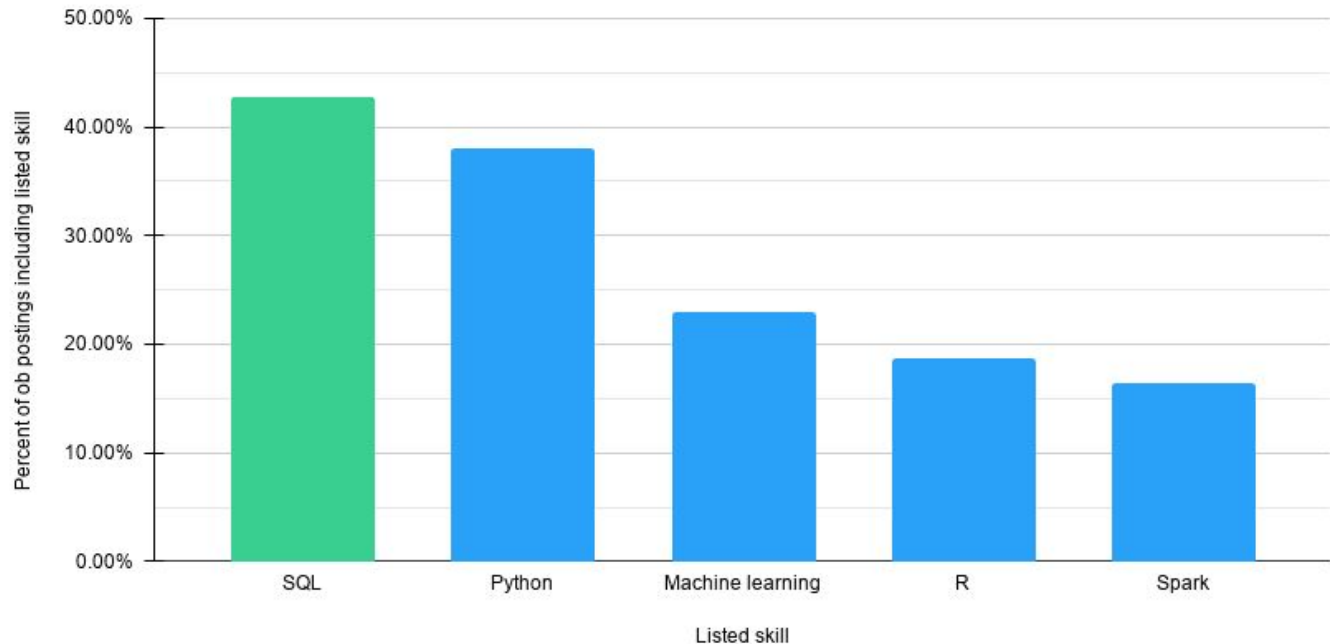
The not so evolved Data ecosystem.

Initial Understanding of the data

# Why you should learn SQL?

## Percent of All Data Jobs Listing SQL

Data Source: Indeed.com, 1/29/2021

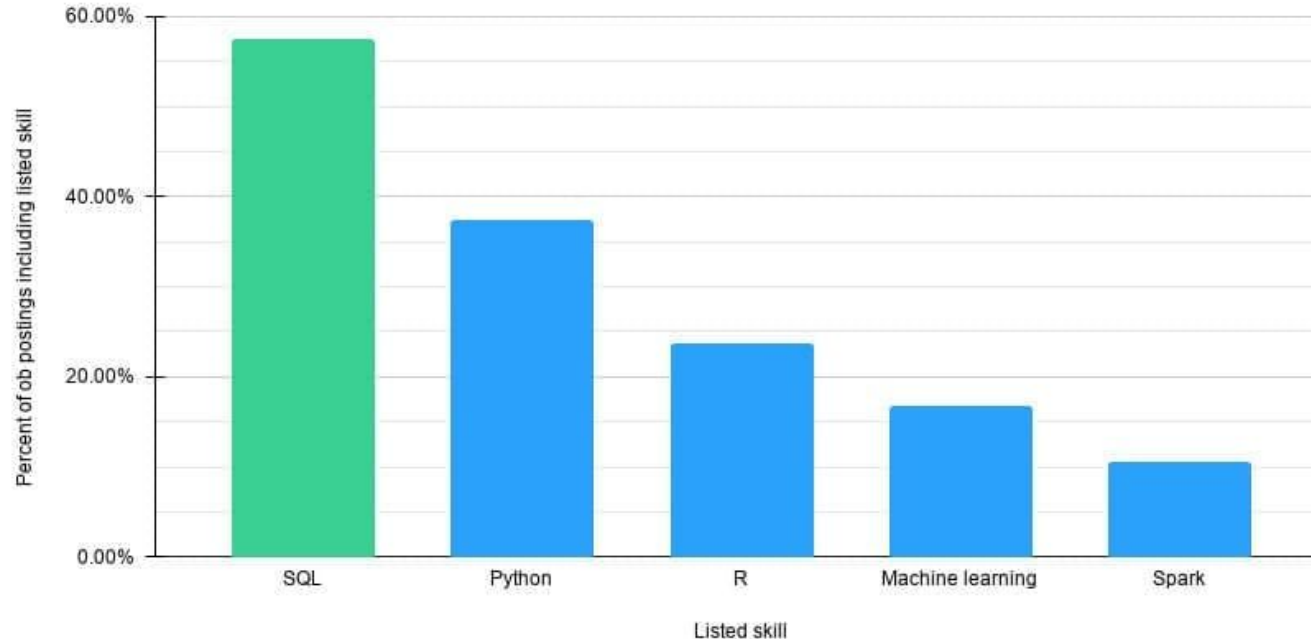


- Data Scientist
- Data Analyst
- Data Engineer

# Why you should learn SQL?

## Percent of All Data Analyst Jobs Listing SQL

Data Source: Indeed.com, 1/29/2021



Entry-level Jobs

# FAQs

Is it hard to learn SQL?

Which database should we choose?

# What exactly to learn?

DML Commands - INSERT, SELECT, DELETE, UPDATE, WHERE, ORDER BY

SQL Joins

Subquery and temp tables

SQL Cases

Stored Procedures and Functions

Window Functions

# What exactly to learn?

Data types

Normalization and Denormalization

Indexing

Query Optimization Practices

Schema Design (Creating Databases and Tables)

# Resources

# My Advise

Practice a lot

Don't just learn to crack interviews