



# Reading: Python applications and resources

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In this course, you will primarily be using BigQuery and SQL when interacting with databases in Google DataFlow. However, DataFlow does have the option for you to work with Python, which is a widely used general-purpose programming language. Python can be a great tool for business intelligence professionals, so this reading provides resources and information for adding Python to your toolbox!

## Elements of Python

There are a few key elements about Python that are important to understand:

- Python is open source and freely available to the public.
- It is an interpreted programming language, which means it uses another program to read and execute coded instructions.
- Data is stored in data frames, similar to R.
- In BI, Python can be used to connect to a database system to work with files.
- It is primarily object-oriented.
- Formulas, functions, and multiple libraries are readily available.
- A community of developers exists for online code support.
- Python uses simple syntax for straightforward coding.
- It integrates with cloud platforms including Google Cloud, Amazon Web Services, and Azure.

## Resources

If you're interested in learning Python, there are many resources available to help. Here are just a few:

- [The Python Software Foundation \(PSF\)](#): a website with guides to help you get started as a beginner
- [Python Tutorial](#): a Python 3 tutorial from the PSF site
- [Coding Club Python Tutorials](#): a collection of coding tutorials for Python

## General tips for learning programming languages

As you have been discovering, there are often transferable skills you can apply to a lot of different tools—and that includes programming languages! Here are a few tips:

- Define a practice project and use the language to help you complete it. This makes the learning process more practical and engaging.
- Keep in mind previous concepts and coding principles. After you have learned one language, learning another tends to be much easier.
- Take good notes or make cheat sheets in whatever format (handwritten or typed) that works best for you.

- Create an online filing system for information that you can easily access while you work in various programming environments.
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