
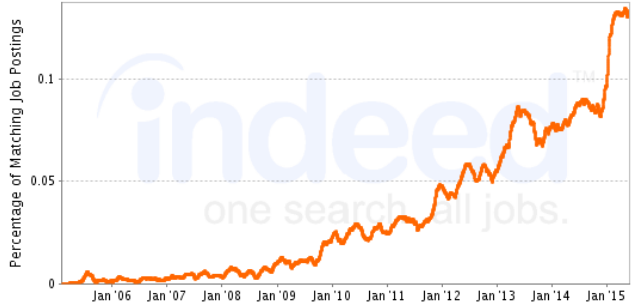


Python or SAS?

We offer these courses two ways: Python or SAS. This leaves you with a choice to make. Below we offer some guidance by comparing the relative merits of each. Either, however, will be a good choice in that both allow for modern computing with large data sets. That said, there are some differences that might help shape your choice

	SAS	Python
Description:	SAS has traditionally been the market leader in commercial data analysis. The software offers a huge array of statistical and analytic functions.	Python originated as an open source scripting language and though not initially used to conduct data analysis. Pandas and other specialized libraries are beginning to change that.
Cost:	Free for educators and students.	Free and open source
System specifications:	SAS Studio will be used for the majority of the specialization, hosted in the cloud, and requiring no downloads onto your machine. Machine learning algorithms presented in course 4 may require downloads of a free version of SAS Enterprise Miner.	Spyder, an open source cross-platform integrated development environment (IDE) for programming in the Python language, will be used.
Availability	Available worldwide excluding Myanmar, Cuba, Iran, North Korea, Sudan, Syria, and China	Available worldwide.

	SAS	Python															
Advancements:	SAS releases well tested updates in a controlled environment.	Python has open contributions and there are chances of errors in latest developments.															
Ease of learning:	SAS is easy to learn. In addition to resources made available through this specialization, there are supporting websites of various universities and SAS has comprehensive documentation.	Python is known for its simplicity in the programming world. This remains true for data analysis as well. Documentation is improving.															
Example Code:	proc freq; tables TAB12MDX;	c1 = data["TAB12MDX"].value_counts (sort=False) print (c1) p1 = data["TAB12MDX"].value_counts (sort=False, normalize=True) print (p1)															
Example Output:	<table><thead><tr><th>TAB12MDX</th><th>Frequency</th><th>Percent</th><th>Cumulative Frequency</th><th>Cumulative Percent</th></tr></thead><tbody><tr><td>0</td><td>38131</td><td>88.49</td><td>38131</td><td>88.49</td></tr><tr><td>1</td><td>4962</td><td>11.51</td><td>43093</td><td>100.00</td></tr></tbody></table>	TAB12MDX	Frequency	Percent	Cumulative Frequency	Cumulative Percent	0	38131	88.49	38131	88.49	1	4962	11.51	43093	100.00	<pre>counts for TAB12MDX 0 38131 1 4962 dtype: int64 percentages for TAB12MDX 0 0.884854 1 0.115146 dtype: float64</pre>
TAB12MDX	Frequency	Percent	Cumulative Frequency	Cumulative Percent													
0	38131	88.49	38131	88.49													
1	4962	11.51	43093	100.00													
Employment Scenario	Globally, SAS is still the market leader in available corporate jobs.	Python is often considered the better option for start-ups and companies looking for cost efficiency.															

	SAS	Python
Job Trends from Indeed.com	<p>Job Trends from Indeed.com</p> <p>— SAS and ("big data" or "data analytics" or "statistical analysis" or "data mining" or "machine</p> 	<p>Job Trends from Indeed.com</p> <p>— Python and ("big data" or "data analytics" or "statistical analysis" or "data mining" or "machi</p> 
Strengths	SAS has a strong brand and is a first class statistical modelling program.	The fact that Python is a general purpose programming language means that knowledge of Python can be useful for all types of programming work
Some limitations	Full license can be expensive outside of the educational environment.	<p>Since the core language is small and excludes many standard scientific operations, such duties fall on third party libraries such as Pandas</p> <p>More work is still needed to make Python a first class statistical modeling environment, but it is on its way.</p>

Luckily, you can't really go wrong whichever you choose. Or you may choose to learn both 😊