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The R-versus-Python debate

People often wonder which programming language they should learn first. You might be wondering about this, too. This certificate teaches the open-source programming language, R. R is a great starting point for foundational data analysis, and it has helpful packages that beginners can apply to projects. Python isn't covered in the curriculum, but we encourage you to explore Python after completing the certificate. If you are curious about other programming languages, make every effort to continue learning.

Any language a beginner starts to learn will have some advantages and challenges. Let's put this into context by looking at R and Python. The following table is a high-level overview based on a sampling of articles and opinions of those in the field. You can review the information without necessarily picking a side in the R vs. Python debate. In fact, if you check out RStudio's blog article in the Additional resources section, it's actually more about working together than winning a debate.

Languages	R	Python
Common features	- Open-source - Data stored in data frames - Formulas and functions readily available - Community for code development and support	- Open-source - Data stored in data frames - Formulas and functions readily available - Community for code development and support

Unique advantages	- Data manipulation, data visualization, and
	  statistics packages
	- "Scalpel" approach to data: *find packages to do what you want with the data*
		- Easy syntax for machine learning needs
		- Integrates with cloud platforms like Google Cloud,
		  Amazon Web Services, and Azure

Unique challenges	- Inconsistent naming conventions make it
	  harder for beginners to select the right functions
	- Methods for handling variables may be a little
		- Many more decisions for beginners to make about
		  data input/output, structure, variables, packages,
		  and objects
		- "Swiss army knife" approach to data:

Languages	R complex for beginners to	*Python out a way to do what you want*