

SMEDG Presentation August 2015

Python Rocks!

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Talk Summary

As time progresses geologists are facing larger and larger datasets due to improved analytical techniques. Although computer scripting has been around for many years it has generally been reserved for specialists because of difficulty of use and the amount of time required to program the type of specialised functions that you may want to use.

Recent developments in the Python programming language have made it very accessible and an incredibly powerful tool for scientific computing and data analysis. Simple to high-end statistical functions and graphs can be applied with just a few of lines of code. It is quickly becoming the tool of choice for most scientific disciplines from Astrophysics to Zoology. Python is totally free, considered easy to use and personally I think it's a great tool for geologists to learn, especially at this quiet time.

To my knowledge most geologists are unaware of the advantages that can be gained from using Python day to day, so I thought I'd introduce the language and give some pointers towards the things that I have found useful including the Ipython Notebook and the Numpy, Pandas, Scipy and Matplotlib libraries. If you use Excel regularly then Python is definitely worth a look. The Scipy library is particularly exciting, offering a wide range of easy to use statistical analyses, classification techniques and machine learning algorithms.

This will not be a lesson in Python although there will be some code to demonstrate the ease of use and some of the applications that I have found useful so far. I'm a geologist, not a computer guru and the plan is to point fellow geologists towards the libraries and functions that could be useful for work in our industry.