

Advanced Python	Learning to write decorators, covering <ul style="list-style-type: none"> <li>• closures</li> <li>• how to work with functions as first-class arguments</li> <li>• variable arguments</li> <li>• argument unpacking, even</li> <li>• some details of how Python loads its source code.</li> </ul>	Morning Sessions
	Exercise: Writing a simple profiling decorator	
	Demystifying iterators, iterables and generators	
	Exercises: writing useful generators	
Machine Learning	Replacing Matlab with Python: <ul style="list-style-type: none"> <li>• Numpy</li> <li>• Matplotlib</li> <li>• Scipy</li> <li>• Pandas</li> </ul>	Afternoon Sessions
	Exercises: Reading and writing csv files Plotting Data Manipulation of DataFrames in Pandas	
	Machine Learning: <ul style="list-style-type: none"> <li>• Basic Machine Learning with Python: Python algorithms implementing basic Neural Networks, k-Nearest-Neighbor, Naive-Bayes</li> <li>• Using Scikit</li> <li>• Basic Introduction into TensorFlow</li> </ul>	
	Exercises: Writing simple classifiers	

Prerequisites:

- Basic Python skills:  
Data Types: lists, tuples, dictionaries  
Conditions and Loops
- Advanced programming experience in another programming language like Java, C++, C or Matlab