Data Science

Prof. Dr. Markus Breunig

**Homework
in preparation of**

**Lecture 3
–
NumPy**

Review Assignment

- Note that everything in these notebooks is material you should already know and considered prerequisites for the Data Science class. This homework is meant as a helper for you to verify your grasp of the prerequisites and catch up on anything you are missing.

- This part is a review of basic object-oriented programming and an introduction to the language Python. A general familiarity with object-oriented programming is assumed. If you have trouble following these notebooks, please visit http://introtopython.org/ for the longer version which is targeted at people who have no coding experience to brush up on your OOP know-how.

- If you are at the expected level of a third semester student, you should spend a couple of hours on these notebooks. If you have actually worked in Python before, you may be quite fast and can probably skim most of the material. If your coding skills are rudimentary, you may need considerable time for this homework!

Review Object Oriented Programming and Introduction to basic Python

(Estimated Time: depends on your coding skills)

This homework assignment consists of the following parts:

- Complete the notebook "Homework03a (Intro to Python: advanced lists and tuples)"

- Complete the notebook "Homework03b (Intro to Python: functions)"

- Complete the notebook "Homework03c (Intro to Python: control flow)"

- Complete the notebook "Homework03d (Intro to Python: dictionaries)"
  This is very important for the class, make sure to understand all this material.

- Complete the notebook "Homework03e (Intro to Python: advanced functions)"
  We will be using some of this in class.

- Complete the notebook "Homework03f (Intro to Python: classes and modules)"
  This notebook goes deeper than we will be going in this class – we will be using classes and modules, but we will not be writing our own modules and classes – so you will not need to understand the intricacies of this notebook in detail – schedule your time accordingly.