Fundamentals of Programming/Coding for Human(s|ists)

Course Syllabus

Digital Humanities Summer Institute
University of Victoria – June 5th to 9th, 2017

The class outline is not finalized and will most likely change before Day 1. The most up-to-date version of the course outline can be found on the course website at https://github.com/ComputeCanada/dhsi-coding-fundamentals.

Instructors:

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Course Description:

This course is intended for humanities-based researchers who do not have a programming background, but would like to understand how programs work "behind the scenes." Over the week, the emphasis will be on understanding how computer programmers think so that participants will be able to participate in high-level conceptual discussions with more confidence. These general concepts will be reinforced and illustrated with hands-on development of simple programs that can be used to assist with text-based research and analysis.

The programming language used for most of the course will be Python. Python has an easy-to-learn and gentle syntax, and powerful extensions. Use of the command-line interface and regular expressions will also be demonstrated and emphasized.

Course Website -- https://github.com/ComputeCanada/dhsi-coding-fundamentals

Learning Outcomes:

You should walk away from this course with the following knowledge:

- Using the command line to automate tasks, manage files and folders, access a remote server, and run Python scripts.
- Installing and accessing Python via multiple platforms for the purpose of code development and execution.
- Thinking like a computer science in order to map out your code and its structure in advance of writing scripts.
- Understanding of the Python 3.x programming language, including the ability to write simple scripts for use in data analysis.

Preparation for the Course:

Before coming to DHSI for June 5th, you may want to consider installing some of the following software on your laptop. Our class will be held in a computer lab, where you will have access to iMacs with all the proper software installed. But you are more than welcome to use your personal laptop for the class as well.

Windows users will need to have software installed that will allow them to access the command line. We recommend downloading MobaXterm, if you do not already have it. You can download a free version of this software at http://mobaxterm.mobatek.net/download.html.

Windows, Mac, and Linux users will need to install Anaconda. Anaconda is a data science platform for Python. By installing Anaconda, you won't need to install Python separately. You can download a free version of Anaconda at https://www.continuum.io/downloads. Please make sure to download the version for Python 3.6.

The textbook for the course will be the 2nd Edition of *Think Python: How to Think Like a Computer Scientist*, version 2.2.20. You can download a free version of this textbook at http://greenteapress.com/thinkpython2/thinkpython2.pdf. The textbook will also be included in the coursepak.

Schedule:

Day 1 – June 5th:

7:45am to 8:15am – Last minute registration for DHSI (MacLaurin Building)
8:30am to 10:00am – Welcome, Orientation, and Instructor Overview (MacLaurin A144)
10:15am to 12:00pm – Class – ***An Introduction to the Command Line*** (1 hour, 45 mins)
12:15pm to 1:15pm – Lunch Break
1:30pm to 4:00pm – Class – ***An Introduction to the Command Line*** (2 hours, 30 mins)
4:10pm to 5:00pm – DHSI Panel: Perspectives on DH (MacLaurin A144)
5:00pm to 6:00pm – Opening Reception (University Club)

Day 2 – June 6th:

9:00am to 12:00pm – Class – ***Python Part I*** (3 hours)
12:15pm to 1:15pm – Lunch Break
1:30pm to 4:00pm – Class – ***Python Part I*** (2 hours, 30 mins)
4:15pm to 5:30pm – DHSI Colloquium Session 1 (MacLaurin A144)
6:00pm to 8:00pm – DHSI Newcomer's Beer-B-Q (Grad Club)

Day 3 – June 7th:

9:00am to 12:00pm – Class – ***Python Part II*** (3 hours)
12:15pm to 1:15pm – Lunch Break
1:30pm to 4:00pm – Class – ***Python Part II*** (2 hours, 30 mins)
4:15pm to 5:30pm – DHSI Colloquium Session 2 (MacLaurin A144)
6:00pm to 7:00pm – "Half Way There!" Birds of a Feather Get-Together (Felicitas, SUB)

Day 4 – June 8th:

9:00am to 12:00pm – Class – ***Integrated Development Environment*** (3 hours)
12:15pm to 1:15pm – Lunch Break
1:30pm to 4:00pm – Class – ***Individual Projects*** (2 hours, 30 mins)
4:15pm to 5:30pm – DHSI Colloquium Session 3 (MacLaurin A144)
5:30pm to 7:30pm – DHSI Librarians Reception (Digital Scholarship Commons, McPherson Library, 3rd Floor)
7:30pm to 9:30pm – (Groovy?) Movie Night (MacLaurin A144)

Day 5 – June 9th:

9:00am to 12:00pm – Class – ***Individual Projects*** (3 hours)
12:15pm to 1:15pm – Lunch Reception & Course Exhibits (MacLaurin A100)
1:30pm to 3:30pm – DHSI Week 1 Farewell, SHARP Conference Opening/Welcome (MacLaurin A144)
4:00pm to 5:00pm – Joint Reception: SHARP and DHSI (University Club)