

## Programming for Digital Humanities, 4ME501: Fall Term 2017

### Final project

**Deadline for the short final project proposal:** December 21<sup>st</sup>, 2017 at 23:55, Moodle

**Deadline for the final project submission:** January 14<sup>th</sup>, 23:55, 2018, Moodle

#### Contact persons:

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#### *Background*

During this course, you have learnt how to process and manipulate texts and images using Python. You have also gained new knowledge related to how to use and apply different visualisation techniques for a particular data set. You have mastered the basics of sentiment analysis. The different pieces of specific knowledge you have gained during these four months allows you to both write and generate code from scratch, and also to find and apply existing libraries and methods for solving different kind of problems that require programming.

The aim of this final project is for you to combine what you have learnt in this course in order to solve a particular and existing problem related to field of Digital Humanities. Of course, you are encouraged to address some specific topic in a domain you are working on which may also include a collection of some type of data (texts, images or any other relevant piece of digital information). The final project will be conducted in two stages (each of those with its own deadline) as explained below.

#### *Stage 1. Description of your own project proposal*

You will first need to describe the specific problem/scenario for your final project in a document not longer than 800 words (+/- 10%). Make sure this description contains the following sections:

- a) **Problem statement:** describe the problem, data available, and discuss its relevance in relation to the purpose which will be achieved by solving this challenge.
- b) **Methodology:** discuss why you need programming to address the problem and describe the programming techniques and approaches you will apply. Explain and argue also why you have decided to follow the approach you have chosen.
- c) **Major blocks of code:** blocks of code here refer to the content of the different programming topics addressed in the course. The final project needs to have at least three of a total four blocks of code: text processing, visualization, image processing, and sentiment analysis. Describe how these topics will be addressed in your final project.
- d) **Expected outcome:** describe what your final result should look like, how much data will be processed, visualised etc. Working individually will mean at least a couple of major outcomes, and working in pairs at least four.

The final project should be carried out in student pairs, and it is suggested that you follow this recommendation. However, individual work is also allowed. By December 21<sup>th</sup>, 23:55 PM, 2017, (at the latest) you should submit your short project description to Moodle. Please follow the publication format available at: <http://goo.gl/OtPQ5>.

## Stage 2. Your particular task

Your project proposal will be evaluated by the teachers. Feedback and suggestions for improvements will be provided to you before you will start implementing your ideas. Using your own description as a point of departure you will carry out and complete this final project. The expected outcomes and final results are described below:

- a) **Deliverable 1:** A program in Python including the code you have written and created for addressing and solving all points describe in stage 1. Remember to include comments in your code where appropriate. The code you have created should contain at least several functions that you have developed as well as call to functions from external libraries (at least two of those libraries).
- b) **Deliverable 2:** Create an interactive presentation (you are free to choose the format and mode of this presentation) of your solution. Create a video of your presentation and post it to Youtube (the duration of this video clip should not be longer than 150 seconds). Share this specific URL with us and
- c) **Deliverable 3:** A final 3-4 pages report (1500-2000 words, +/- 10%) describing your work as well as a brief overview of the challenges you have encountered and the solutions you have developed and implemented. Please follow the following publication format available at: <http://goo.gl/OtPQ5>.

This assignment should be conducted in pairs although individual work is also allowed. You will need to upload a ZIP file (final\_project\_last\_name1\_lastname2.zip) containing all the Python code you have developed. Please will need to upload also a PDF file named 'lastname1\_lastname\_2\_final\_project.pdf' to the specific folder connected to this final project in Moodle. Please do not forget to add to the report the URL of the Youtube video you have produced. All materials should be submitted to Moodle by January 14<sup>th</sup>, 23:55, 2018.