Python scripting Ling 572

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1 Goals

The primary goal of the course is to acquaint students with the basics of the Python programming language and to introduce them to some of the many tools available for data collection and data analysis.

2 Practice

The course will not have any required texts, relying on line materials designed both by the instructor and others. But for those desiring a backup text, *Python for Dummies* (Stef Maruch and Aahz Maruch) is optional and recommended.

There will be weekly assignments and several inclass quizzes, a midterm, and a final project.

3 Learning Outcomes

1. Read a simple python program and then describe what it does, and what resources are required to do it;

2. Write simple scripts executing basic data analysis tasks for social science data;

3. Apply some native Python data analysis tools to data;

4. Transform data of various kinds (especially text data) into a form in

which useful statistical analysis and classification can be applied;

5. Apply simple Python visualization tools to gain insights into variable

dependencies.

Pre-requisites 4

No course pre-requisites. No knowledge of programming will be asssumed. Upper division standing. Some openness to acquiring computational skills. Some knowledge of what counts as interesting data in your own Social Sci-

ence.

Grading 5

Grading will be based on exercises, quizzes, and a final project.

• Exercises: 40%

• Quizzes: 20%

• Midterm 20%

• Final project 20%

Grading Assignments 6

Grading of problem sets is as follows:

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Plus Every problem attempted, effort on all problems, commented code. Even if the answers to some are wrong or give incorrect results, effort has been made and code has been tested. If something doesn't work, comments explain what happens.

Check Very little or no effort made for at least one problem, code has very obviously not been tested, or code is uncommented.

Minus No effort made on at least half the problem set, or problem set not turned in.

To get a C in this class, you must earn a Plus on the majority of the assignments. Three Minus scores are a cause for concern and will require a meeting with the instructor. Late assignments will be graded according to the lateness policy, as solutions will be posted immediately.

7 Late Assignments

The general structure of the course is not well-suited to late assignments or missed quizzed. Assignment solutions will be discussed in detail on the day they are turned in, and thus students who turn assignments in late will be at an advantage. Quizzes are designed to test understanding of foundation needed for further work, and without those foundations, progress will be slowed. However, to allow for some flexibility, late assignments will receive partial credit. Here is the lateness policy:

- 1. Up to one week late: 50% credit for assignment (this basically turns a Plus into a Check, and a Check into a Minus). Late assignments must include all problems for which solutions have not been posted in order to receive any credit at all.
- 2. More than one week late: not accepted

8 Attendance

Attendance is not a formal part of your grade.

However, be aware that assignments are, and extensive amounts of class time will be devoted to working through exercises like those on the assignments. Similarly, hints on how to solve problems on the assignments and the midterms are handed out liberally in class. These hints will not be posted on the web pages.

9 Group Work

Group work is encouraged on the assignments. The midterm and final project should be completed without any help. To be clear on this, collaboration or group work on the midterms and finals will be considered cheating.

When turning in collaborative assignments, your collaborators should be identified on your paper. The code you write on your group assignments should be your own.

10 Office Hours

Th 9:30-10:30 Tu,Th 12:30-1:30 Tu 3:30-4:30

by appointment

11 Mailing address

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12 Weekly Syllabus

http://gawron.sdsu.edu/python_for_ss/course_core/course_outline.html