Introduction

Luis Pedro Coelho

Programming for Scientists

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Introduction

Who am I

- Luis Pedro Coelho (luis@luispedro.org)
- BS & MS in Computer Science
- Ph.D. in Computational Biology
- Post-Doc at IMM (UBEG)
This course

- Meets: Today + Next two mondays (9h00 to 18h00)
- Office Hours: luis@luispedro.org
- Course Website: http://luispedro.org/projects/pfs-09-2012
Homework

- There will be a homework assignment between the two sessions.
- You can do it on your own, in pairs, in groups, or not at all.
- If you do turn it in, I will give you feedback.
- Similarly, if you have questions during the week, I will take the time to address them in class.
Course Overview

What this course is

- No prior knowledge is assumed
- Introduction to programming using Python
- Topics of interest to scientific programming
Course Overview

What this course is not

1. A very advanced programming course
2. A bioinformatics course
3. Applied to specific topics (e.g., NGS analysis)
Things I Left Off

1. Version control & collaboration
2. Unix: shell, processes, getting command line arguments
3. Software engineering or even most of software carpentry
4. Network programming/database interaction
5. A lot of detail on the things I did leave in

If there is interest, we can organise a follow-up course in early 2013.
## Schedule

Subject to changes

<table>
<thead>
<tr>
<th>Time</th>
<th>Day I</th>
<th>Day II</th>
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<tbody>
<tr>
<td>9h00-10h20</td>
<td>Python II</td>
<td>HW Review/In-class Quiz</td>
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<tr>
<td>10h30-11h30</td>
<td>Numpy. matplotlib</td>
<td>Open Source Software</td>
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<tr>
<td>11h40-12h25</td>
<td>Guided exercises</td>
<td>Unit tests</td>
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<td>Break</td>
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<tr>
<td>14h00-15h20</td>
<td>Python III</td>
<td>Python IV</td>
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<tr>
<td>15h30-16h30</td>
<td>File parsing</td>
<td>Guided exercises</td>
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<tr>
<td>16h40-18h00</td>
<td>Numeric issues</td>
<td>Review. Learn more</td>
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Python

- On Windows: Python(x,y)
- On Mac OS X: EPD or homebrew/macports
- On Linux: Just use your package manager
Class starts here.