Course Overview and Python Review

Problem Solving using Python - Week 1

Today Outline

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1. The "Why? What? and How?"
2. Who Are We? Who You Are?
3. Our Teaching Philosophy and Policies
4. Course Website and Syllabus Overview
5. Some More Logistics
6. Q&A

Welcome!

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Why?

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Why?

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Learning to solve programming problems using Python

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What?

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How?

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Why?

Programming requires multiple steps and it is challenging for novice programmers

What?

Learning to solve programming problems using Python

How?

With *Programming Problem Solving model* and tackling real problems

Learning Objectives

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Learning Objectives

At the end of the course, you will...

1. be able to solve programming problems in a methodical and thoughtful manner based on the "Programming Problem Solving Model".

2. be able to write, read, modify, test and debug programs in written Python.

3. have a Pythonic Mindset.

Who are we?

Who are you?

Our Teaching Philosophy and Policies

"Problem Solving using Python"
is a joint journey

Learning is
an active, cognitive and social process

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an active, cognitive and social process

Learning should be authentic

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Real world problems

from AI, ML, NLP and data science

Motivation, interest, curiosity and fun matter

Motivation, interest, curiosity and fun matter

Authorship detection

Motivation, interest, curiosity and fun matter

Authorship detection

Image editing

Motivation, interest, curiosity and fun matter

Authorship detection

Image editing

Code breaking

Motivation, interest, curiosity and fun matter

Authorship detection

Image editing

Code breaking

Movie review sentiment analysis

Motivation, interest, curiosity and fun matter

Authorship detection

Image editing

Code breaking

Movie review sentiment analysis

Plagiarism detection

Building our capacity to solve programming problems takes time and effort

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Lecture

Mondays 14:15-15:45 (SHARP)

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Mondays 14:15-15:45 (SHARP)

Lab

Wednesdays, 16:15-17:45 (SHARP)

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Lecture

Mondays 14:15-15:45 (SHARP)

Lab

Wednesdays, 16:15-17:45 (SHARP)

80% attendance which is calculated separately for the lecture and for the lab

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Office Hours

Wednesdays, 12:00-14:00

Building our capacity to solve programming problems takes time and effort

Homework

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Homework

- Part of the learning process
- Individually
- You will get a personal feedback, not just a grade

Building our capacity to solve programming problems takes time and effort

Homework

- Part of the learning process
- Individually
- You will get a personal feedback, not just a grade

- Usually every two weeks, for two weeks
- Given in the in the lab
- With a deadline a day before the other lab
- No extensions, except for extreme cases

Building our capacity to solve programming problems takes time and effort

Exams

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Exams

You will have to solve programming problems **on a lab computer**.

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Purposes

1. Evaluation
2. Feedback

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Midterm

- In the 9th week
  (the week of Dec 10)
- Only one date, contact us ASAP
  if you cannot make it

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Exams

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Purposes

1. Evaluation
2. Feedback

Midterm

- In the 9th week
  (the week of Dec 10)
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Final

- In the semester break
- We will have two dates

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Grades

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Grades

Component	Percentage
Homework	45%
Final Exam	25%
Midterm Exam	15%
TBD	10%

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We value consistent work throughout the semester.

That's why homework makes up almost half of the total grade.

Learning is about continual improvement, therefore we need rapid feedback

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1. Lab

2. Homework

3. Exams

Teaching should be adaptive and personalized

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1. Lab sessions

Teaching should be adaptive and personalized

1. Lab sessions
2. Homework Feedback

Teaching should be adaptive and personalized

1. Lab sessions
2. Homework Feedback
3. **Office hours**

Teaching should be adaptive and personalized

1. Lab sessions
2. Homework Feedback
3. **Office hours**
4. Midterm Exam

Teaching should be adaptive and personalized

1. Lab sessions
2. Homework Feedback
3. **Office hours**
4. Midterm Exam
5. Muddy Cards

Failure is essential to learning

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- Therefore, every assignment have a relatively small impact on your grade

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- If you don't make to solve a part of an assignment,
  you still may get part of the points, if you:
  - Explain with details what you've tried and why it didn't work
  - Convince us that you've tried hard enough (e.g., coming to the office hours)

We all have a code of honor

We all have a code of honor

Us

- 6 ECTS x 30 Hour/ECST = 180 Hours
- Fair and transparent

We all have a code of honor

You - Learning Cooperatively

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- With the exception of the exams, we would like for you to discuss the tasks in this course with classmates and friends.

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- If you find yourself helping someone who is struggling with the material follow this one simple rule:
  Don't give them your code or the answer. Let them discover and write it on their own, with your guidance.

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You - Learning Cooperatively

- With the exception of the exams, we would like for you to discuss the tasks in this course with classmates and friends.

- If you find yourself helping someone who is struggling with the material follow this one simple rule:
  Don't give them your code or the answer. Let them discover and write it on their own, with your guidance.

- If you find yourself receiving help from one of your peers, follow this one simple rule:
  You don't want to see anyone's code or answer. Even if you don't intend to copy it!

We are all human

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- 80% attendance

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- No late policy for homework
  contact us ASAP if you have an exceptional reason

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- No late policy for homework
  contact us ASAP if you have an exceptional reason

- Please contact us for any other issue

Course Website and Syllabus Overview

problemsolving.io

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problemsolving.io

- Schedule
- Announcements
- Resources
- Course Information and Policies
- "Should I take this course?

Course Website and Syllabus Overview

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All is in the announcements in the website

- PULS - until November 20

- Until the lab on Wednesday: Pre-course forum & Lab access form

- Piazza - register with your `@uni-potsdam.de` email

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Don't have a `uni-postdam.de` account yet?
Send us an email or talk with us after the class

Wrap-up + Q&A

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