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Introducing an RSE Course at the University of Potsdam - First-Time Experiences and Plans for the Next Iteration

We introduced a new Research Software Engineering (RSE) course at the University of Potsdam to help students from different backgrounds acquire important RSE skills and supplement their existing programming knowledge. This initiative is in response to the increase of basic programming skills among students from different fields, but the lack of experience of how to apply them in actual research contexts. The class, which was first offered in the summer term of 2023, consisted of lectures about relevant RSE themes, using the online book "Research Software Engineering with Python" (Irving et al.). Additionally, it featured sections on FAIR software principles, software engineering techniques like requirement engineering and architectural modelling, and computational workflows.

The first iteration of the course surpassed expectations, drawing around 60 participants from 10 study programs, such as computer science, business informatics, physics, computer linguistics, and data science. Attendees exhibited great eagerness and interest in obtaining RSE knowledge. The course layout, which comprised of solitary Jupyter notebook projects (developing a computational narrative around a dataset from the national statistics office) and collaborative group projects (developing a software solution for a research question posed by one of the group members), was very much appreciated.

Following the success of the first iteration, the RSE course at the University of Potsdam intends to increase participation to create a more diverse group. Steps will be taken to tackle formalities and regulations that may obstruct student enrollment. Furthermore, we commit to encouraging cross-disciplinary partnerships by creating more diverse project teams and considering adding a talk on cross-disciplinary and cross-cultural communication. In the next round, we will furthermore put a greater emphasis on workflow automation by integrating tools like Snakemake and customizing the group task to achieve a workflow application.

Slot length

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