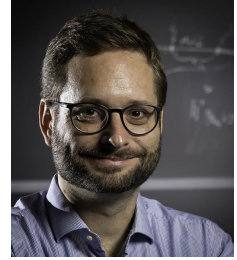


Teaching Portfolio

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Educational Training

2015 Lecturer Training Programme at the University of Southern Denmark
2015 Two-day Course on the usage of rubrics
2015 Two-day Course on the usage of student response systems

Administrative tasks related to education

I am member of the team for designing, implementing, and managing of the new Masters program on Computational BioMedicine at the University of Southern Denmark, which successfully ran in fall 2016 for the first time. This involved planning of the curriculum, designing new courses, organizing events for the new students to support a friction free onboarding.

Furthermore, since fall 2015, I am responsible for assessing the applications from international students for the computer science study programs.

Experience with teaching, supervision and examination

since 2018 Deep Learning
since 2018 Deep Learning Summer School
since 2017 Introduction to Bioinformatics
2015-2017 Unsupervised Learning
2014-2017 Computer Architecture
PhD Students 4 active/3 completed
Master thesis 5 active/20+ completed
Bachelor and ISA 1 active/15+ completed
External Censor PhD theses, MSc theses, Machine Learning Courses (Copenhagen and Aarhus)

Methods, materials and tools

I personally see teaching as one of the most important, challenging but also most rewarding duties of a university professor. The fundamental pillars of my teaching can be summarized in (a) clear communication, (b) situation-aware flexibility, (c) engagement and (d) entertainment.

In my opinion, the basis of successful teaching is clear communication. This includes clearly stating what I expect from the students and being clear about their responsibilities as well as what the students can expect from me. Most importantly, the learning objectives need to be clearly communicated upfront to help students prioritize their learning efforts.

The situation-aware flexibility manifests in various aspects, for instance the spontaneous adjustment of the lecture depending on the feedback of the students, e.g., explaining difficult parts in an alternative way, adjust speed and vocabulary accordingly. I try to use comments and questions of the students as effectively as possible and refer back to them during the lecture. This helps on several levels: It serves as an anchor as the comment came from the classroom and returning to it means returning to a point the students demonstrated interest in and were comfortable with; it furthermore shows that the students' questions are taken seriously motivating students to continue asking questions.

Another part of situation-aware flexibility contains the adjustment of non-essential parts of the curriculum to accommodate the particular interests of the student groups, for example discussing a particular topic in greater detail than originally planned.

Student engagement is a crucial part in order to implement the aforementioned pillars. Only by actively involving students in the lecture it is possible to gather enough feedback in order to adjust the lectures and check the learning progress of the students. I see active discussions as a fundamental vehicle to facilitate student learning. I try to establish an open but respectful atmosphere in which every student feels welcomed and invited to participate. Further, all my courses contain projects, mostly conducted in group work. This not only facilitates learning but also communication and discussion skills. Naturally, it is challenging to find projects such that the good students are challenged but the weaker students are not demotivated and frustrated. In order to achieve that, I design the assignments in such a way, that the students have a high degree of freedom. There are rather simple and straightforward solutions but the students can freely decide to also implement more advanced algorithms, for instance. To further motivate the students, small competitions (e.g., who writes

the fastest program) have proven to be an extremely effective measure and have led to astonishing results. Last but not least, I pay respect to the fact that the students are mostly young adults who also want to be entertained to a certain degree. Only an active and entertaining lecture enables students to sit alert throughout an entire lecture. It is also important to allow for intellectual breaks, e.g., by telling a topic-related anecdote. Further, I utilize so-called student response systems which also serve as a small break and depending on the questions asked, help the students with the understanding of the content or form the beginning of a lively discussion. This loosens up the atmosphere and makes the classroom more alert overall. Additionally, I use slides only as supporting material during the lecture and not as the center of attention. My teaching normally is a transition between the slides and the blackboard where I develop complex matters iteratively together with the students.