

Teaching Philosophy Statement

In my teaching approach, I embrace two educational philosophies: student-centered teaching and liberalism. Student-centered teaching focuses on putting students at the centre of the learning experience, tailoring education to their unique needs. I believe in creating a safe and supportive environment where every student can thrive individually. Liberalism underscores the importance of cultivating well-rounded individuals with diverse and multidisciplinary knowledge and skills. I aim to equip my students with a broad education, enabling them to succeed in their chosen fields of interest.

For me, teaching is a collaborative journey where both teachers and students support each other in skill development and learning. As a teacher, my role is to foster students' interests and nurture their abilities. On the other hand, students should actively engage in the learning process, deepening their understanding of the skills they want to acquire and staying open to new learning opportunities.

Since I work in the interdisciplinary field of applied data science, it is crucial that my teaching approach focuses on developing both hard and soft skills. I guide students in becoming well-rounded individuals equipped with a versatile skill set they can apply in any area they choose. This is the ultimate objective of my teaching.

Given that applied data science encompasses diverse backgrounds, with students ranging from the humanities and social sciences to mathematics and physics, inclusivity is paramount in the educational process. My goal is to ensure that all students, regardless of their prior knowledge, can engage effectively with the course materials. Therefore, I aim to make lectures and tutorials accessible to everyone, ensuring that no one feels left behind. Simultaneously, I strive to avoid redundancy, preventing students from feeling bored or wasting time on familiar topics. To address this point, I have developed course materials that can be beneficial for students of varying skill levels. I offer separate coding tutorials for beginners and intermediate users, allowing students to self-assess their proficiency and select appropriate resources. Additionally, students who want to explore more advanced topics receive access to more advanced materials through supplementary links. This approach not only aligns with my human-centric teaching philosophy but also provides many opportunities for students to delve deeper into their chosen areas of study.

In my course design, I prioritise inquiry- and game-based learning to make the educational process more engaging and effective. Inquiry-based learning encourages students to explore, question, and discover knowledge independently, fostering critical thinking and curiosity. Game-based learning transforms assignments into interactive challenges, motivating students to actively participate and apply their coding skills to solve intriguing puzzles. These approaches are combined in my coding home assignments. These assignments reinforce lecture concepts and provide real-world problem-solving opportunities. By simulating practical scenarios, they equip students with valuable coding skills and prepare them for success beyond the classroom. This comprehensive approach combines student-centered philosophy with interactive learning and practical application to empower students in the dynamic field of applied data science.

In my opinion, assessment is a critical part of the learning process. It serves as a valuable tool for students to assess their progress and for teachers to refine their teaching materials and methods. In my view, assessment also acts as a motivational driver, encouraging students to be more attentive and invest more time in comprehending the

course materials. Therefore, every week, after finishing home coding assignments, students are encouraged to take a test, which includes both theoretical questions and practical coding exercises. These tests are pass/fail graded, primarily aimed at providing students with feedback on their understanding of the course materials. During the course, there are usually two larger coding assignments, where students work on guided projects, applying the concepts they have learned. Ultimately, there is a culminating final project, where students collaborate in groups to conduct independent research, applying the acquired concepts and methods, and presenting their findings.

The final projects not only serve as means to evaluate the overall outcome of the teaching process but also foster debate and feedback during the final presentations. This aligns with my philosophical standpoint, emphasising the importance of collaboration and discussion in the learning journey. Witnessing the progress students make, both in their individual understanding and their ability to work together, is a rewarding aspect of my teaching experience.

Another crucial aspect of my teaching concerns the use of technologies. Given the significance of technology in the field of applied data science, it is important for students to not only acquire technical proficiency but also to understand the ethical implications and appropriate application of these technologies. Throughout my teaching, I emphasise the ethical considerations and responsible practices associated with technology usage, including discussions on data privacy, security, and the potential societal impacts of data-driven decisions. By teaching this ethical awareness, I aim to prepare students to be not just proficient practitioners but also responsible drivers of technological changes.

In conclusion, I would like to reiterate that my teaching philosophy stands as a harmonious blend of humanism and liberalism, underscored by the principles of inclusivity, engagement, and ethical technology use. By prioritising students and their learning experiences, I seek to provide a well-rounded education that equips them to thrive in the interdisciplinary realm of applied data science. Through inquiry-based and game-based learning, complemented by practical coding assignments, I aim to cultivate curiosity, foster critical thinking, and emphasise the importance of ethical decision-making. As I embark on this educational journey alongside my students, I am not only nurturing their academic growth but also empowering them to become responsible, adaptable, and ethically conscious individuals, who will be able to make a meaningful impact in our technologically-driven society.