Statement of Teaching Philosophy
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My relationship with learning continues to shape how I educate and interact with others. From a young age, and still to this day, I struggle to feel confident in my field despite successes and support from colleagues and mentors. I see a similar lack of confidence in the students that I teach. Further, many of my learning experiences, especially in K-12, were very isolated. It wasn't until college that I came to fully appreciate the joy and benefit of learning new ideas with others. As an instructor, I seek to create a safe space where students become confident in their skills and understand the impact of learning together.

As a graduate student, I have been a Teaching Assistant for over two years. The courses are typically taught in a flipped-classroom style and focus on the foundations of coding and analysis. The students complete pre-class assignments that contain introductory videos and examples on the current topic. In class, they complete assignments in groups to strengthen their understanding of the same material. The assignments are set up in a problem-based manner. Many of the assignments have a single goal and the students are guided through the various tasks towards completing that goal. At each group table, there is a monitor for one person to share their screen. This allows instructors to assess student learning without disrupting group interactions too frequently. As a Teaching Assistant, it is my job to facilitate group interactions, answer student questions, and gauge student understanding of the material.

I appreciate the flipped classroom style as the learning that happens in this model is multifold and upholds the aspects of education that I value. The students learn the content while simultaneously developing their problem-solving and critical thinking skills. They strengthen their communication skills by discussing their ideas with their groupmates and supporting those ideas with justification. Moreover, the students become independent learners, while seeing the value in seeking input from others, especially when they do not have all the answers.

The burden of creating an environment that supports these multifaceted aspects of the learning experience fall on the instructor. We do our best learning when we feel heard and seen by those around us. Thus, when I communicate with students in their groups, I am mindful of the structure of the interaction. When they ask a question, I respond by asking them to share the ideas that they have already implemented. As a group, we discuss the results of those ideas and how they differ from the result they expected. When working through an idea with a group, I rotate where my questions get directed. This ensures that everyone's ideas are asked for, heard, and respected. Doing so, highlights the importance of seeking the input of others and emphasizes that everyone's ideas are critical to the productivity of the group. I have found that these meaningful interactions with a group of students allows them to trust me and trust each other. They feel more comfortable sharing their ideas and often complete more of the assignment than other groups. My role as a facilitator is to teach students the skills to have insightful group interactions, eventually without my guidance. These productive interactions are the gateway to deep problem-solving and critical thinking skills, which lend themselves to confidence in their abilities, beyond the classroom walls.

In my current position, the main opportunity to assess student learning is through conversations with them as they are working on their in-class assignments, discussions resulting from questions during office hours, and evaluations on their biweekly homework assignments. I find that I learn the most about a students' understanding of the material through discussions with them. It allows me to truly identify their thought process of solving the task, rather than just the code they have submitted. As a future instructor, I plan to continue these types of interactions and create homework assignments that capture these ideas. In addition to their code implementation, I want to assess them on their ability to explain their thought process in constructing their code as well as the results of their code. The purpose of this is two-fold. First,

I will be able to deeply assess their comprehension of the content. Second, it gives them practice describing their process and results to others – a skill in computation that does not get the attention that it needs. Additionally, in my courses, I will integrate more formative assessments. Embedding low-stakes, short quizzes, exit polls, and think-pair-shares into my course will help me to identify misunderstandings in student learning quickly. These assessments will inform my instruction, but also instill a lifelong practice in the students of evaluating their own knowledge.

The plans stated above are just that, plans. While I will implement them in the courses that I teach, they are fluid based on student needs and critiques. Throughout the semester and at the end of the semester, I will directly ask for student feedback on the difficulty of the content, the presentation of the material, and the classroom environment. With their thoughts in mind, I will reflect on my teaching process and use it as the foundation for updating the curriculum in each of my courses. For example, as a Teaching Assistant, I noticed that students found it challenging to understand the results of the code used to access different elements of a data frame. I implemented gifs to highlight the results of introductory data access code and invited them to try examples on their own. I am excited to have more autonomy as an instructor to do this more frequently. The personal commitment I have to lifelong learning is directly correlated with the impact that I wish to have on my students. I cannot continue to ask my students to learn new techniques and skills without continuing to do so myself. Personally, I will continue to learn about the best practices in education and computation by attending workshops, sharing ideas with colleagues, and communicating with my students.

I am conscious of my personal identity as well as the privileges and struggles that come with it. I am lucky to be surrounded by mentors who support my ideas and thoughts. These mentors continually show me the possibilities of what I can become. My career goal as an educator is to reciprocate this type of support for my students. While I am building a seat at the table for myself, I seek to help others build their own seats. My role as an educator goes beyond my years of teaching. My students are the next generation of educators, researchers, scientists, and citizens. By creating a seat at the table for them, I hope to inspire them to continue to do the same.

My teaching experiences in graduate school have provided a great foundation for developing my own courses. The flipped-classroom style helps me appreciate opportunities for instigating problem-solving, critical-thinking, and analytical skills in my students. I plan to continue this style of learning in each of the courses that I teach. Rather than lecturing on the facts of the field, my students are harnessing the skills they need to explore the material of the course. But more importantly, with these skills, they are building the ability and the confidence to learn any material they desire. Through teaching, I hope to mentor students in a way that highlights their successes, guides them through their mishaps, and helps them learn the value in their collaborations. It is my duty to help them succeed, not only in my course, but in all learning experiences. I hope they leave my classroom knowing that they can do it, trying new ideas is fun, and listening to others makes the world is a better place.