Teaching Statement

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My teaching philosophy is driven by the importance of promoting a holistic view of science, fostering student engagement, and taking full advantage of teaching technologies. These aspects continuously manifest in my classroom in simple practices, such as employing vision deficiency inclusive design, recording asynchronous lectures, utilizing a flipped classroom, and intentionally referencing and citing researchers from diverse backgrounds. Moreover, I am fortunate to have had multiple opportunities to put my principles into practice in more fundamental ways.

My first experience consciously reflecting over my belief that science should be approached holistically was as a Graduate Teaching Assistant for an "Introduction to Artificial Intelligence" course at Michigan State University. After much deliberation, I approached the supervising faculty with a revised syllabus that aimed to nurture the students on multiple fronts: as Machine Learning practitioners, scientists, and community members. First, I modified the assignment to focus on reproducing simple but `real` research rather than toy examples; for instance, Dr. Lillian Lee's Naive Bayes method for sentiment analysis on her movie review dataset. This ensured students gained experience implementing and applying algorithms on real world data. Second, the assignments were managed via GitHub, necessitating students to learn how to work with `industry standard` programming workflows and allowing them to begin developing crucial `soft` programming skills. Finally, noticing an alarming lack of discourse surrounding `ethics of AI`, I contacted a professor in the philosophy department, who agreed to be a guest lecturer in an ethics mini-module that became a core part of the course even in later semesters after my involvement ended.

More recently, I began to also consider student engagement as the main supervisor of students completing their Bachelor's and Master's theses at Goethe University. Through weekly meetings, I encouraged my students to interrogate their approaches, metrics, and results rather than chase marginally better performance on a specific benchmark. This approach helped drive my students' enthusiasm as they engaged more deeply with their experiments, formalizing hypotheses regarding why different trends and patterns emerge when using particular metrics or algorithms and not others. As a result, my students have consistently received excellent feedback after their defense. Moreover, I often continued to collaborate with them post-graduation on turning their projects into manuscripts which they presented at prestigious conferences. Most importantly, I truly believe that their experience completing their final projects was a step towards becoming capable researchers that can read, analyze, and think critically about the projects they are engaged in.

Finally, working as project director for the Refugee Outreach Collective NGO `Global Classroom` initiative, I have been able to harness various teaching technologies to their fullest potential. The Global Classroom initiative allows residents of Dzaleka refugee camp in Malawi to enroll in accredited online classes and obtain an Associate's degree from Central Michigan University at no cost. This project

allowed me to fully apply my belief that technologies can facilitate a better learning experience. The lessons were designed with a flipped classroom approach in mind; recorded lectures are made freely available, and classes are often spent with students assisting each other with the material under the guidance of upper-classmen as tutors. So far, we have had our students – non-native speakers, who are studying online asynchronously in a community center – achieve grades comparable to those of the average in the in-person classroom.

Considering my previous academic work, I am especially interested in teaching introductory statistics and programming courses, intermediate `machine learning` and `pattern analysis` courses, and also interdisciplinary seminars focusing on `computational modeling` and `sensation and perception` which would benefit from the diverse perspectives of students from various disciplines such as engineering, psychology, and neuroscience.

In conclusion, I have immensely enjoyed my various teaching experiences so far. I strongly believe that by carefully incorporating technology, making conscious choices regarding the content being shared, and intentionally steering the students towards critically analyzing the material being taught, teachers can design classrooms that promote active engagements and prepare students to participate in the scientific community beyond the classroom. I look forward to continuing my teaching journey as my academic career develops.