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Teaching Statement

Throughout my graduate career, I have had multiple opportunities for teaching experiences. Regular lab presentations were an integral part of my role as a Teaching Assistant for several departmental course offerings. Moreover, my most notable teaching assistant experience has been for two courses, Longitudinal Data Analysis and Multi-level Modeling, taught to students with a variety of skill sets ranging from those in other departments with only introductory prerequisites to PhD Biostatistics students. My duties for those courses were teaching hour-long lab sessions, holding office hours, and writing and grading examinations. I assisted **Professor Elizabeth Colantuoni** in revamping materials and content for these courses in Spring 2011, the term for which I won the **Helen Abbey Teaching Award**. I have also served as a Teacher's Assistant in undergraduate courses as well as many winter and summer interim courses. Through these teaching experiences, I have found the following four areas to be essential to my approach to conveying concepts: **perspective, stories, visualization,** and **organization.** In all presentations, whether for lab presentation, class lecture, computing club, or an open house for prospective student recruiting, I implement to varying degrees the following principles.

Perspective: To better relate to my students' perspective, while planning coursework and conveying concepts, I keep in mind the hurdles and breakthroughs that occurred to impart my current understanding of the subject. I firmly believe that mastery of a subject is less about raw student intelligence and more about high caliber teaching that: motivates students to work toward understanding, gives students the tools to make progress, and provides the mentoring to avoid stalemates and frustration. I incorporate my personal journey of learning alongside the ongoing feedback of the class, honoring the range of backgrounds, aptitudes, and goals of the students.

Stories: By "stories" I am referring to creating an associative narrative in instruction. Such storytelling is powerful because of the inherent structure and the flexibility of incorporating metaphors, allusions, pertinent applications, and pop-culture. In statistics, any approach being taught is a solution to what was once a problem; a provision for some desire. Naturally, telling a story starting with the conflict, outlining the attempted solutions and eventual breakthroughs is a method that resonates with learners and is more memorable than a "just the facts" lecture. As an example, consider how effective Basu's use of his Elephant counterexample to weighting was by virtue of the narrative built around a rather technical fact.

Visualization: Visualizing a concept well allows a teacher to say more while talking less and allows students to glean more of the essence of the signal, of which the features are key to ultimate understanding and future application of the material.

Organization: Organization provides structure to foster connections to the material and understanding of the concepts. Therefore, I seek to unify the over-all greater theme of the course on levels of structure by attending to the administrative details of the syllabus and content by viewing individual lectures as vignettes in the greater story over the course of a term.