Narrative Summary of Teaching

As a faculty member at SUNY Potsdam for six years, I have had the privilege to pursue my passion for teaching through twelve different courses and my love for teaching has only intensified. I have had the opportunity to impact the growth and development of undergraduate students at all levels, from freshmen to seniors, and have seen them grow into confident professionals. I am eager to further build on my teaching career and continue to positively influence my students.

The field of computer science is continually evolving, and it is essential to keep our courses updated to prepare students for industry jobs and/or graduate school. To address this need, I led the development of a new Data Analytics track and helped in the creation of a new track in Computer Security. For the Data Analytics track, I designed, developed, and offered the two new courses: Machine Learning and Data Analysis and Visualization and revitalized the third course, Database System incorporating advances in the field. For the Computer Security track, I worked with Prof. Ladd to design the track and was fully responsible for one new course, Cryptography. I played a crucial role in the approval process for both tracks, working closely with committees at all levels of the university, and we are currently awaiting final approval from SUNY.

In recent semesters, I taught 7 different courses: CIS 201 Computer Science 1 (including lecture, lab and recitation), CIS 301 Theory of Computation, CIS 325 Data Analysis and Visualization, CIS 410 Computer Networks, and CIS 420 Database Systems, CIS 431 Machine Learning, and CIS 475 Introduction to Cryptography. These courses have been regularly revised kconsidering changes in the field and student/peer feedback. Some of these revisions include incorporation of Big Data concepts and projects in the Database course, personalized assignments and exams in my cryptography course, introduction of a lab for the Computer Networks course, and inclusion of projects and research paper reviews in all 400-level courses. The changes were aimed at incorporating a practical aspect into courses that are otherwise predominantly theoretical.

To foster active student participation and maintain high attendance rates, I introduced pop-up quizzes in class. Emphasizing group projects in all upper division courses, I focus on promoting peer-to-peer collaboration and communication to align with the expectations of industrial settings. Additionally, I use real-world examples to strengthen students' understanding, such as utilizing publicly available data in fields like cars, weather, and real estate in my data analytics and machine learning courses. It is gratifying to receive feedback from students that these techniques are preparing them well for internships and careers, as noted by one of our students (Eric Zair '20) in his interview for SUNY Potsdam's CS Web page (https://www.potsdam.edu/academics/AAS/depts/CS/Zair).

During the early months of the pandemic, when we had to transition our courses to online offering at short notice, I chose to conduct my classes asynchronously, with the assumption that my students can pace and access the course according to their situation at home while maximizing learning. This transition was aided by my prior attendance of CCI workshop in early Spring 2020, where new technologies for online education were introduced to us. I incorporated learnings from that workshop in my online offering and posted weekly pre-recorded lectures, related short quizzes, and associated homeworks. Additionally, I was available for 3 hours of

office hours on all weekdays on *Discord* (Computer Science department server) for students to "stop by" and discuss any questions they had. My goal was to recreate or even exceed the in-person experience that the students were used to.

At the end of the Spring 2020 semester, however, I realized that the lack of regular structured interaction with students affected student-learning and my teaching experience. During summer 2020 I attended an online pedagogy course (session 5) offered on campus to facilitate development of knowledge, skills and attributes for effective online teaching and learning. For Fall 2020, I made a "course-correction" by switching to synchronous offering. This change resulted in a course that was much closer to my regular in-person offering. The student feedback was very positive for this change.

The change in the mode of teaching to online from in-person benefited students in many ways, including with access to recorded lectures after class and being able to electronically "walk-in" to my office hours via discord. Some students, however, found this transition a bit challenging, and in their evaluations noted that the Fall 2020 semester was stressful and overwhelming. Recognizing that students face a diverse set of challenges that are not easily evident to me, I've been encouraging regular contact through office hours and was open to some flexibility in deadlines.

Some of the pandemic-driven changes in my teaching have become part of my offering when we got back to in-person teaching. As an example, I am using tablets for lecturing, so I can face my students while teaching and post recordings after class, and continue to use discord for office hours, in addition to face-to-face meetings, to provide flexibility in how students reach me.

As an educator, I am dedicated to delivering high-quality and impactful lessons that foster student engagement and success. My commitment to improvement is evident in the positive evaluations from my students and peers who observe my classes. I take their feedback seriously and make thoughtful adjustments to my teaching style and course content to enhance the learning experience for my students.

In addition to imparting knowledge, creating a supportive and inclusive learning environment is equally important. I strive to provide a safe space where all students feel comfortable to express themselves, regardless of their individual identities and comfort levels. To achieve this, I approach my students with respect, encourage open communication and discussion, and actively promote a respectful and inclusive atmosphere in my classroom. This ensures that all students feel valued, heard and supported in their learning journey.