

# Teaching Report: Spring 2021

For the spring semester of 2021 I have had three primary focuses: taking my qualification exam, creating learning modules for the async course ITCS 5156 Applied Machine Learning and continuing research. Once again, I have continued working with Dr. Le. However, this semester I was charged with preparing three course modules which consist of lecture videos, labs, quizzes, discussion questions and supplementary resources. In parallel with these activities, I have continued attending the teaching seminar to help prepare me for teaching my own class. Lastly, I have continued work on my research, website, and teaching portfolio when time has permitted.

## Teaching ITCS 5156: Applied Machine Learning

One of my primary focuses this semester has been creating three course modules for the Applied Machine Learning class taught by Dr. Lee. This class aims to take a more practical approach to teaching machine learning and focuses much less on the technical aspects of the algorithms and more on the high-level concepts.

I was charged with creating a module on Docker, deep learning, and convolutional neural network (i.e., working with images). For each module I created a write up introducing and explaining the concept, additional notes written walking students through core aspects of the concept, lecture videos diving deeper into the concepts, labs to help walk students through applying the concept, simple quizzes to assess the students learning of the concepts, and discussions to facilitate students thinking about potential applications and drawbacks of the concept introduced. Furthermore, each module was accompanied by a host of 3rd party videos and resources I had gathered. The goal of doing so is to provide alternative perspectives on each module's concepts.

Much like previous semesters I managed student interactions but this time via CampusWire which is a discussion form where students can post questions. I also held office hours weekly for students seeking additional help. Lastly, I provided Dr. Lee with feedback on any labs he created for his modules.

## Teaching Seminar

Just like previous semesters, every Tuesday for I attended a graduate teaching seminar (ITSC 8665). This semester, the seminar focused on refining the TA handbook we created last semester. This entailed working in groups and editing, revising, and adding additional content to existing chapters. I was in charge of editing the section on TA roles which covers the various roles TAs fill and provides information on how to approach each role. Further, we converted the format of the handbook from a book to an online interactive website making it more accessible to students and TAs.

I believe this is the fourth teaching seminar I have taken which means I have reached the number of times I am required to take this course. Thus, I do not plan on taking this seminar again unless otherwise instructed. It has been a great experience and I have really enjoyed helping create a handbook focused on helping and guiding new TAs!

## **Research and Qualification Exam**

I also spent the first half of the semester focusing on completing my qualification exam which I passed. I presented a survey of intrinsic interactive reinforcement learning (intrinsic IRL) which is a field that combines brain-computer interfaces and reinforcement learning.

With the qualification out of the way my next goal is to propose. I plan on staying in the same field (intrinsic IRL ). Before I do propose, my sub-goals are to publish my qualification exam as a survey paper and publish another paper concerning intrinsic feedback (feedback derived from brain signals).

## **Teaching Workshops**

Unlike prior semesters I did not have time to attend any teaching workshops. However, I do plan on attending some workshops over the summer if they are being hosted.