Dr. Nathan Crock

1. An aspect of the technical work described by the speaker and its potential implications for someone who is not technically trained (we all may be customers or patients of procedures/decisions arising from the technical work):
   1. He talked about how he gives a 3 hour seminar on “What is AI?” before any discussions now as most companies asking them aren’t even sure what it even means or the scope of what it can do.
      1. “A problem clearly stated is a problem half solved.” – Charles Kettering
      2. He explains what machine learning is through Mitchell’s definition as “A computer program…said to learn from experience E with respect to some class of tasks T and performance measure P, if its performance at tasks in T, as measured by P, improves with experience E.”
      3. In order to have clearly defined expectations of the technical work they do, he asks the not technically-trained companies 3 questions
         1. What is the Task you would like to accomplish?
         2. What kind of Data do you have?
         3. How will you measure success?
   2. Technical work on the AutoMask for the animals faces being put on clothing
      1. The ideas could be extrapolated to work for more than just animals, and in fact facial recognition software has been around for many years already, but to automatically be able to detect a creature and crop just its face could have implications for privacy.
   3. He talked about the call simulator for 911 dispatchers.
      1. This technology obviously has implications for anyone who has ever called 911 because it should allow these time-sensitive calls to be resolved more quickly and effectively than before.
         1. This could lead to more lives saved and more people helped overall by one of our national public safety services.
2. Comment on career advice you gleaned and found useful or that changed your perspective:
   1. “When labeling we are at risk of circumscribing reality within the confines of our own notions.” – Edmund Burke (4:15)
      1. Starting off with this quote was very impactful as it put into perspective the fact that we are all operating on what we believe to be true in our own reality, but we should always be aware that it may not be the sole way to view something. Allows for anything to be rightfully challenged for further understanding of the topic.
   2. Data in industry is, certainly in relation to academia, unkempt and unclean.
      1. Dr. Crock’s story about the many hoops and hurdles through which his company had to navigate merely to understand the data with which they were working reminded me that classwork is made to teach first and foremost, and that cleanliness/workability is typically not the case out in the real world/industry.
   3. After his finished presentation when Dr. Crock was taking questions, Dr. Slate asked about what they (NewSci) seek in an intern helped me understand the several ways in which I could be evaluated for one of these positions.
      1. NewSci specifically invites the person to jump on the problem and asks them what they would do in order to see if their thought processes and problem-solving methods are a good match for the company.
      2. Showed me that just knowing about the theory and the abstract concepts taught in class are definitely not enough and put into perspective why that’s the case.
         1. It’s of no use to anybody if you know the algorithms, but you do not know when to apply them or how to manipulate the given data in order for them to work.