CSCI 447/547: Start Thinking

January 28, 2018

Due Feb. 9.

1 Project idea

In lieu of a exam, this course requires a final project, which will be largely of your own design. For the project, you have three options:

Book Report: Identify and obtain a peer-reviewed paper in the field of machine learning. This could be something you read about (Machine Learning is all over pop-sci publications these days), or perhaps its an important paper in your field of interest. You will prepare a report summarizing the salient methods and conclusions of the paper. Note that this option is only available to undergraduates.

Implementation Project: Identify and implement a machine learning algorithm that was not covered in class. For example, you could use expectation maximization to cluster El Niño versus La Niña years based on SnoTel data. Show that it works by applying it to a test data set, and write a report on how it works.

Tool Project: Apply a pre-existing machine learning library to a non-trivial dataset. For example, you could teach TensorFlow to recognize dogs in photos. Write a report describing the dataset, the library, and the algorithm, as well as the conclusions drawn from your analysis.

To get you thinking about this project, I'd like you to identify a paper, dataset, algorithm, or tool that you might want to use for this project. **Write a paragraph outlining the subject, how you might approach it, and why it's worth studying**. I will not hold you to using this for your final project (there's alot of semester left). If you would like help identifying a suitable target, talk to me during office hours and I can try to point you towards something you might be interested in.