Applications of Machine Learning in Hydrology
Homework 3: Paper Selection Due April 6th at 11:59 PM. Presentation Due 2nd and 3rd Weeks of April (On Presentation Day)

For this homework, you all will present a published paper focusing on machine learning in hydrology. People will present on either April 11th, April 13th, or April 18th. I have included some example papers on the Github (in the "papers" folder), although you are free to choose any paper that is relevant to the class. **Please send your choice of paper to me and Lazaro by April 6th at midnight**. If you'd like to volunteer for the first two days (Tuesday, April 11th or Thursday, April 13th), please let us know. Otherwise, we will pick presentation days randomly for each person/pair. We'll try to get the schedule out to everyone by April 4th, so please let us know before then if you'll be working with a partner. And of course, let us know if you will be missing any of the presentation days.

You are allowed to work solo or with a partner. If you are by yourself, we expect a 15-minute presentation + 5 minutes for questions. If you are working with a partner, we expect a 30-minute presentation + 10 minutes for questions. The presentation should consist of the following general format:
- Paper background (what info do we need to know to understand the bulk of the paper)
- Summary of paper (intro, methods, results, conclusion)
- Analysis of paper
  - What did they do wrong (wrong model, bad data, properly use cross-validation, standardization, imputation, etc.)
  - What did they do right (choice/construction of model, strong comparative analysis, good writing, strong conclusions, etc.)
  - Is the main message of the paper convincing?

As you are working through the paper, I would recommend thinking about the analysis questions first, so that you know what will be important to summarize from the paper

We will upload the papers that people will be presenting on April 7th, so if you have time, I would recommend skimming some of the other papers that sound interesting to you. The goals of this assignment are to replicate a conference presentation and Q/A scenario, and to provide you with some ideas for your project.