**Group Members/Contact:**

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**Due Dates:**

Proposal #1 -- **Thursday, October 19th**

Proposal #2 - **Thursday, November 2nd**

Project: - **Thursday, November 30th**

**Assignment Link:** <https://connect.ubc.ca/bbcswebdav/pid-4475265-dt-content-rid-23025662_1/courses/SIS.UBC.STAT.406.101.2017W1.90616/assignment-17%281%29.pdf>

**Problem Ideas**

**Predicting when a player will break out of a slump, or cool down:**

* Players can go through periods where their performance goes through a “slump,” additionaly a period where they are performing better than they should be, call it a “streak”. Here we would predict the ending to both the slump or a streak.
* Would need to set what stat/combination of stats are relevant to a slump/streak. Could look at:
  + 1. Which stats are particularly helpful to team wins (BA? OPS? HR?)
    2. Slump/streak predictions for each stat (for example, “Trout is in a slump for BA but his OBP is streaking”).
    3. Just pick a stat/combination of stats that we feel are important.
* Prediction is broken up into two parts:
  + *Unsupervised learning:* Figuring out what a slump is and whether or not a particular player is in a slump/streak.  Each player would have an individual level of variance so that would affect whether or not they are in a slump. Also, need to look at career trajectories to know if the down/uptrend of numbers are actually a slump/streak or just the new normal for the player.
  + *Supervised learning:* Actually predicting when the slump will be busted.