1125-I5-309 **Glenn D Sidle*** (`gdsidle@ncsu.edu`) and **Hien Tran**. *Using Machine Learning to Predict the Next Major League Pitch.* Preliminary report.

Since the introduction of PITCHf/x in 2006, there has been a plethora of data available for anyone who wants to access the minute details of every baseball pitch thrown over the past decade. Everything from the initial velocity and release point to the break angle and strike zone placement is tracked, recorded, and used to classify the pitch according to an algorithm developed by MLB Advanced Media. Given these classifications, we developed a model that would predict the next type of pitch thrown by a given pitcher, using only data that would be available before he even stepped to the mound. We used data from three recent MLB seasons (2013-2015) to compare individual pitcher predictions based on linear discriminant analysis, multi-class support vector machines, and classification trees. Using a committee approach to reduce the variability in each prediction, we achieved results that beat the best guess for almost every pitcher examined while improving on the best guess by an average of close to 10%. (Received August 25, 2016)