

DSC 630 Predictive Analytics

Assignment 1.1: What Is Predictive Analytics?

Introduction

This paper will offer a brief summary of what predictive analytics is and will talk about a way to describe it to someone that knows nothing about data science. Additionally, it will cover how predictive analytics is different from other similar fields such as analytics, business intelligence, statistics, and data mining.

The Definition of Predictive Analytics

Predictive analytics arose from a desire to translate raw data into informative insights that can be used not only to understand past patterns and trends, but also to provide a basis for accurately predicting future outcomes. Predictive analytics are a process of extracting data from existing data sets with the aim of identifying trends and patterns, and these trends and patterns will then be used to predict *future* outcomes and trends. While this is not an absolute science, predictive analytics does provide with the ability to forecast future trends and behaviors reliably.

Describing predictive analytics to someone that knows nothing about data science is something that can be done rather easily, as predictive analytics are used in nearly everything we see or experience! To a sports fanatic, you can give the example of “Moneyball”, a coin that was termed for the use of predictive analytics in Major League Baseball. As general manager of the Oakland A’s in the early 2000s, Billy Beane used data to build his team’s rosters. He was able to create teams filled with players that weren’t superstars or ones that had huge salary commitments based upon analytics and statistics.

This trend spread throughout MLB not long after, and in fact made its way to my favorite baseball team, the Chicago Cubs. After 108 seasons of futility, the Cubs finally won it all in 2016, led by an enigmatic coach, Joe Maddon, and a team of players that was built by President of Baseball Operations, Theo Epstein. Epstein came to Chicago not long after winning two rings in Boston. I will always be convinced that one man broke both “The Curse of the Bambino” and “The Curse of the Billy Goat”, primarily with the use of predictive analytics — and a little luck, of course.

How Predictive Analytics is Different

While predictive analytics shares traits with similar fields such as analytics, business intelligence, statistics, and data mining, it is something altogether different; in fact, it is more applicable to say that all of those other areas are building blocks for predictive analytics. A common phrase when describing the difference among these fields might be to say that analytics, business intelligence, statistics, and data mining are all needed to *run* the business while predictive analytics are needed to *change* the business.

Other ways to think about the difference between PA (predictive analytics) and these other areas is that all of the others concentrate a lot on the questions such as the “what” and the “how” while predictive analytics answers the questions of “why?” All of

these are very important questions to ask, and the goal of predictive analytics is to get the answers to these “why” questions to make forecasts for the future.

Conclusion

Whether you are seeking predictions for the future in the world of business, health, financial markets, weather, professional sports — or even fantasy sports — predictive analytics is a wonderful tool that uses analytics, business intelligence, statistics, and data mining to build models that can help us forecast the future.

Resources

<https://www.mathworks.com/discovery/predictive-analytics.html>

<https://www.datapine.com/blog/difference-between-business-intelligence-and-analytics/>