**Week 1 Overview**

Welcome again,

Predictive Analytics is the use of data, statistical algorithms and machine learning techniques toproduce actionable insights from historical data to facilitate the decision-making inorganizations.  This subject equip you with the fundamental knowledge and skills required forconducting predictive analytics targeting business needs. Topics include fundamental businessanalysis concepts, processes, tools and methods for predictive analytics, data pre-processing,principle component analysis, clustering, regression and association analysis. Besides thetheoretical knowledge, you will learn to apply the practical skills through real-life study casesusing commercial and open source tools.

In this week, we will introduce you to predictive analytics.

By the end of this week, you should be able to:

* Identify the importance of predictions
* Describe the benefits of predictive analytics
* Give examples of predictive analytics from real life.

 In the world of large amounts of data, it has become possible to predict the future as a business is all about prosperity and success over the future times. It would be beneficial if there is a chance to learn from the past and then apply the outcomes to improve future performance and avoid any past mistakes. When using predictive Analytics, it is possible to predict future outcomes provided that we use the correct techniques and mechanisms and apply those techniques to meaningful data that we have gathered from previous transactions conducted by the business. It is always a possibility that we can extract some useful insights from the data we have.

It is always critical to use the proper tools. One of the biggest common mistakes possible is to apply the incorrect mechanism that will not produce the results we seek.

In the coming sections of this week, we will briefly take a look at some of the topics we will be covering in the semester.