Capstone Project 1 Ideas

Idea 1: Predict if a patient has heart disease based on a patient's test result and symptoms. Data for this problem is readily available on the UC Irvine Machine Learning Repository website. There are four datasets each with the same fourteen variables, such as type of chest pain and cholesterol level.

Idea 2: Given a fixed amount of money and a set of stocks, determine the amount of each stock to purchase. This is a classic portfolio optimization problem that minimizes the variance of the return given a desired return. For example, if a person has $100,000 to invest in 1,000 different and wishes to achieve an 8% return, then which stocks and how much should the person purchase to minimize the variance of the return? The data for this project will come from Yahoo finance. Historical stock prices can be downloaded from Yahoo finance.

Idea 3: Determine which NBA players are overvalued and which ones are undervalued. The idea is that if two players are paid the same salary then they should have similar statistics or if two players have similar statistics then they should be the paid same salary. Statistics for players during the 2016-2017 regular season can be found on the website stats.nba.com. Salary information for players during the 2016-2017 regular season can be found on ESPN.com.