Springboard Data Science Course

Data Science Capstone Project 1

Orthopedic Biomechanical Features

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Today's radiologists use technology to assist them with interpretation of radiological results. Orthopedic biomechanical measurements can be used within a machine learning algorithm to classify results as normal or abnormal. Can these algorithms predict a diagnosis as well? The goal of this project is to predict a potential medical issue based on abnormalities in biomechanical measurements of patients. This requires a model that is accurate enough to differentiate between normal and abnormal results and determine which medical issue could be the basis of abnormal results.

Data

Data for this project is found at Kaggle and includes 12 columns of measurements related to orthopedic angles (decimal), and a column of classification.

Approach

KNN classification has already been performed on this data but I want to search for an improvement on this model. Classification techniques I plan to use are Logistic Regression and Discriminant Analysis to provide improved accuracy on reported results.

Deliverables

The projects' results will be reported to include a) findings b) code with documentation, and c) visualizations to GitHub and, as an option for some users, a website created using Anvil software.