Machine Learning Case Study

AArete Uses Machine Learning to Advance Professional Sports Team's Player Review Process

SITUATION

A professional sports team approached AArete to enhance their decision making processes specific to predicting a player's future potential for success. The team's existing evaluation strategy relied heavily on scouting reports and basic forecasting methods (such as linear regression) on limited, high-level data. The goal of working with AArete was to develop a machine learning model to enhance player evaluation approach.

APPROACH

In order to develop a custom predictive model, AArete worked closely with the client to understand how they defined player success. From there, we determined the appropriate way to translate this definition into a variable to be used in the model. Prior to initiating our modeling process, AArete compiled a comprehensive data warehouse of quantitative data, which represented player attributes and performance, and qualitative data, which represented external factors like player behavior and other elements that could not be captured in the quantitative data. Once our team compiled the warehouse, we applied cutting edge machine learning techniques, leveraging our distributed computing environment to test iterative models. Ultimately, our model was able to confidently predict a respective player's success potential based on the client's unique definition.

RESULTS

AArete synthesized outputs from the model into a custom, user-friendly dashboard which allowed the client to easily interpret and seamlessly incorporate findings into their player review process. Using our model, the client was able to identify high quality, high impact players who were undervalued by the industry. This proprietary knowledge allowed our client to target and acquire low-risk, high-reward players to improve overall team performance.