

TITLE:

Longitudinal analysis of athlete development in youth team sports

DESCRIPTION:

Soccer has long been one of the most popular and financially lucrative sports in the world. The formation of the Premier League in 1992, which has a brand value exceeding \$10 billion, has produced a market for data-intensive analytics of every facet of the game to provide marginal, yet crucial gains for the teams involved.

It is common for senior soccer clubs to invest heavily in an Academy structure, with Manchester City FC investing \$249 million in 2014 to construct their City Football Academy, with the goal of training, guiding, and promoting youth prospects up into senior team roles. Hence, a major challenge is to identify the statistical metrics that pinpoint which youth players have the most talent and are therefore worth the long-term investment of the club.

This project involves working with the global performance tracking company, STATSports, alongside local, national, and international youth Academy squads, to undertake an in-depth longitudinal study of individual player metrics across their youth careers. By examining athletes spanning under-10 to under-18 age groups, it will be possible to benchmark the statistical progress of individual players, examine how their performance characteristics develop with time and different training methodologies, and ultimately identify the core metrics that differentiate between amateur, semi-professional, and professional level athletes while they are still in their youth development phases.

The project requires a student who is interested in cutting-edge sporting analyses, with a background in mathematics, physics, computer science, and/or sports science. The student will be part of the Predictive Sports Analytics (www.predictive-sports-analytics.com) team that is based in the School of Mathematics and Physics. It is envisaged that the student will actively engage with partner sports clubs, as well as participate in both national and international meetings and workshops, where they will disseminate their novel research to a global audience. As a result, the ability to travel and work within a team environment is a crucial component of the research objectives.