

## **Interpretation of Results**

From the results of the experiments, we are reasonably certain that the simulator can provide some insight into the expected result of a particular match. Given the number of simplifications and assumptions made in the modelling, one can only assume that the prediction capabilities of the simulation will rise as model complexity increases.

On the other hand, we feel that there is a lot of potential with the second sort of experiment, where different tactics can be tested. From our experiment, there seemed to be an increase in wins for Villa by changing tactics, while the number of goals scored and conceded remained statistically similar. One surprising thing about the results was the lack of increase in number of goals scored by Villa. We believe this represents a more 'hit-or-miss' approach to the game - either the weaker team managed to capitalize on the counters and long passes to great effect or their strategy became completely ineffectual. This is reflected in the higher standard deviation values in the second run.

What does this mean for the user of SoccerSim? If I was the Villa manager and saw this output (and if I was a risk-taker), I would instruct my team to do as in the second run, as this gives more chance of snatching a win at the risk of conceding more goals. It seems as though the simulator is able to provide managers and coaches with more context to their decisions, which can be important in a game as lucrative and taxing as football.

Overall, we feel that adding dynamic t-testing and chart plotting capabilities to the simulator itself would be a significant improvement, seeing as we have to manually plot out the graphs and perform the t-tests as of now. In addition, we are pleasantly surprised by the insight that can be gained from such a (relatively) simplified model, and hope that more work can be done in future to increase the realism of the model.