Data Analytics

Paarth Gupta (15477)

31st August 2019

1 Run Production Functions

Our aim to come up with a run production functions that can predict the number of runs to be scored given the number of overs remaining and the number of wickets in hand.

To start off, we took out the columns of the data that are of our interest and then put the condition on them to extract only first innings rows from them. Tried different methods from optimize library but L-BFGS-B method was converging faster when compared to others.

Loss Incurred : 110628402.51573178
11 optimized parameters :
z_0 : 13.51
z_1 : 27.31
z_2 : 51.08
z_3 : 78.81
z_4 : 103.93
z_5 : 137.53
z_6 : 168.53
z_7 : 207.14
z_8 : 238.66
z_9 : 282.18
L : 10.92

Loss might seem a bit high but there is an appropriate reason for that :
I have also considered the 1423 extra points corresponding to the 50 overs remaining and 10 wickets in hand.
1 points has been discarded while training that had the wrong information i.e the runs scored till that over was more than the total runs scored in that innings.

Plot:
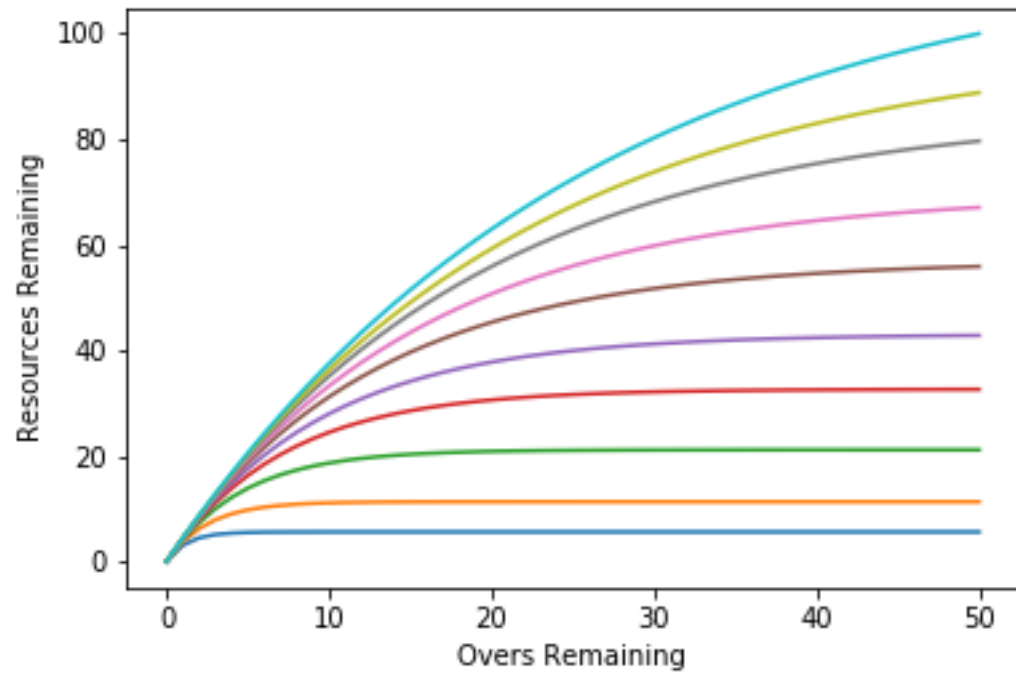
The lower most graph represents the situation when we have 1 wicket in hand
and the upper most graph represents 10 wickets in hand.