GooglyPlusPlus2021 is now fully interactive. Please read the below post carefully to see the different ways you can interact with the data in the plots.

There are 2 main updates in this latest version of GooglyPlusPlus2021

- a) GooglyPlusPlus gets all 'touchy, feely' with the data and now you can interact with the plot/chart to get more details of the underlying data. There are many ways you can slice'n dice the data in the charts. The examples below illustrate a few of this. You can interact with plots by hover'ing, 'click'ing and 'double-click'ing curves, plots, barplots to get details of the data.
- b) GooglyPlusPlus also includes the 'Super Smash T20' league from New Zealand. You can analyze batsmen, bowlers, matches, teams and rank Super Smash (SSM) also

Note: GooglyPlusPlus2021 can handle a total of 11 formats including T20 and ODI. They are

- i) IPL ii) Intl. T20(men) ii) Intl. T20(women) iv) BBL
- v) NTB vi) PSL vii) WBB. viii) CPL
- ix) SSM x) ODI (men) xi) ODI (women)

Each of these formats have 7 tabs which are

- Analyze batsman
- Analyze bowlers
- Analyze match
- Head-to-head
- Team vs all other teams
- Rank batsmen
- Rank bowlers

Within these 11 x 7 = 77 tabs you can analyze batsmen, bowlers, matches, head-to-head, team vs all other teams and rank players for T20 and ODI. In addition all plots have been made interactive so there is a lot more information that you can get from these charts

Try out the interactive GooglyPlusPlus2021 now!!!

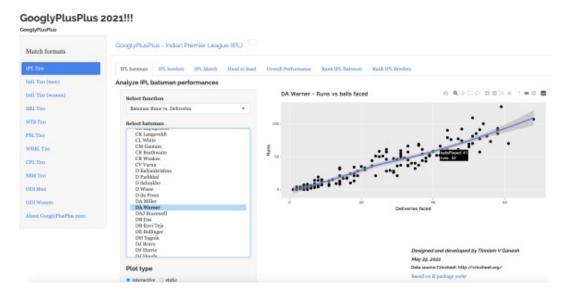
You can fork/clone the Shiny app from Github at GooglyPlusPlus2021

Below I have randomly included some charts for different formats to show how you can interact with them

a) Batsman Analysis - Runs vs Deliveries (IPL)

#### Mouse-over/Hover

The plot below gives the number of runs scored by David Warner vs Deliveries faced.

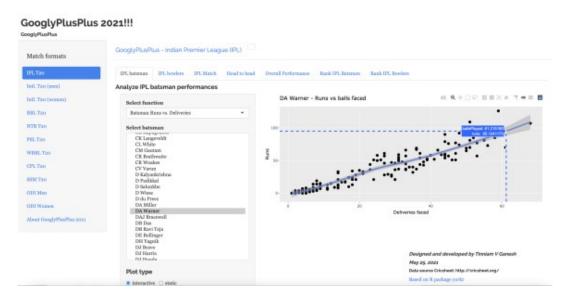


### b) Batsman Analysis - Runs vs Deliveries (IPL) (prediction)

Since a 2nd order regression line has been fitted in the above plot, we can predict the runs given the 'balls faced' as below

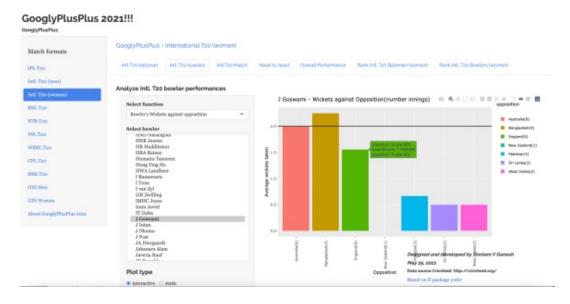
Click 'Toggle Spike lines' (use palette on top-right)

By using hover(mouse-over) on the curve we can determine the predicted number of runs Warner will score given a certain number of deliveries



### c) Bowler Analysis - Wickets against opposition - Intl. T20 (women)

Jhulan Goswami's wickets against opposition countries in Intl. T20 (women)



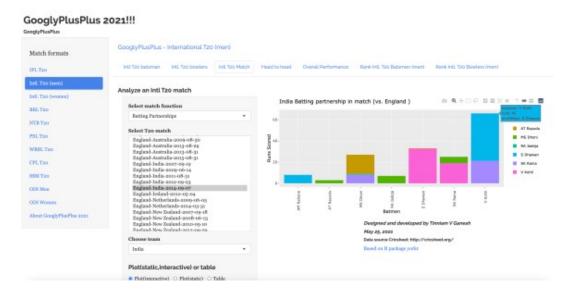
### d) Bowler Analysis (Predict bowler wickets) IPL - (non-interactive\*\*)

**Note**: Some plots are non-interactive, like the one below which predicts the number of wickets Bumrah will take based on number of deliveries bowled



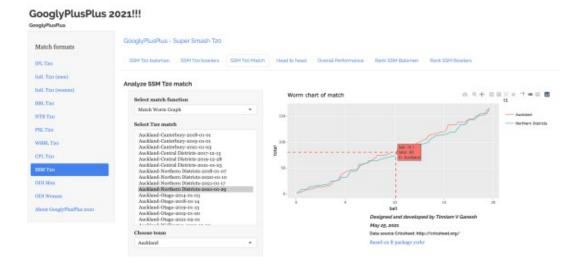
### e) Match Analysis - Batsmen Partnership -Intl. T20 (men)

India vs England batting partnership between Virat Kohli & Shikhar Dhawan in all matches between England and India

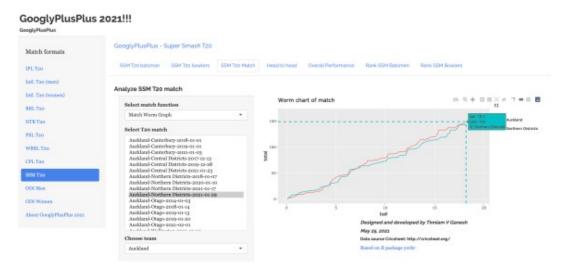


### f) Match Analysis - Worm chart (Super Smash T20) SSM

i) Worm chart of Auckland vs Northern Districts (29 Jan 2021).

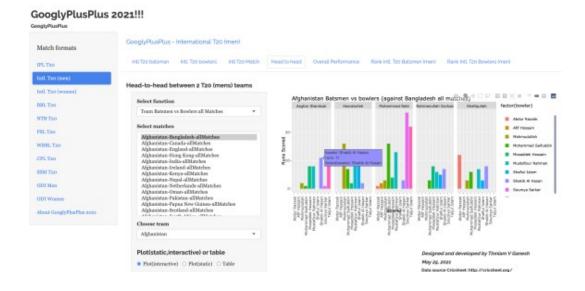


ii) The final cross-over happens around the 2nd delivery of the 19th over (18.2) as Northern Districts overtakes Auckland to win the match.



# g) Head-to-head – Team batsmen vs bowlers (Bangladesh batsmen against Afghanistan bowlers) Intl. T20 (men)

Batting performance of Shakib-al-Hasan (Bangladesh) against Afghanistan bowlers in Intl. T20 (men)



## h) Head-to-head – Team batsmen vs bowlers (Bangladesh batsmen against Afghanistan bowlers) Intl. T20 (men) –Filter

Double click on Shakib-al-Hasan on the legend to get the performance of Shakib-al-Hasan against Afghanistan bowlers

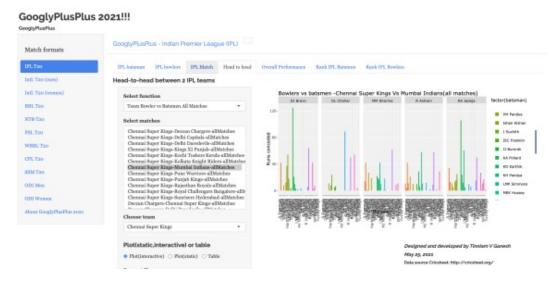


### Avoiding the clutter

## i) Head-to-head – Team bowler vs batsmen (Chennai Super Kings bowlers vs Mumbai Indians batsmen) – IPL

If you choose the above option the resulting plot is very crowded as shown below

To get the performance of Mumbai Indian (MI) batsmen (Rohit Sharma & Kieron Pollard) against Chennai Super Kings (CSK) bowlers in all matches do as told below

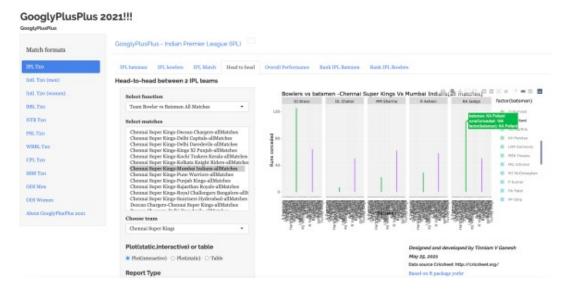


### Steps to avoid clutter in stacked bar plots

1) This can be avoided by selectively choosing to filter out the batsmen we are interested in. say RG Sharma and Kieron Pollard. Then **double-ciick** RG Sharma, this is will bring up the chart with only RG Sharma as below



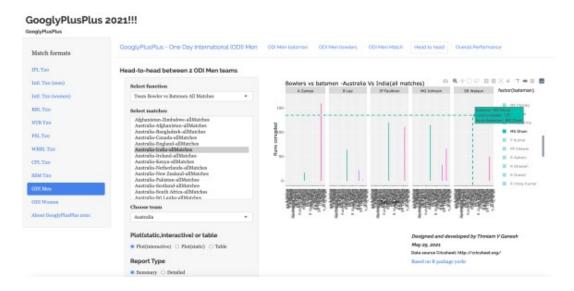
2) Now add additional batsmen you are interested in by single-clicking. In the example below Kieron Pollard is added



You can continue to add additional players that you are interested by single clicking.

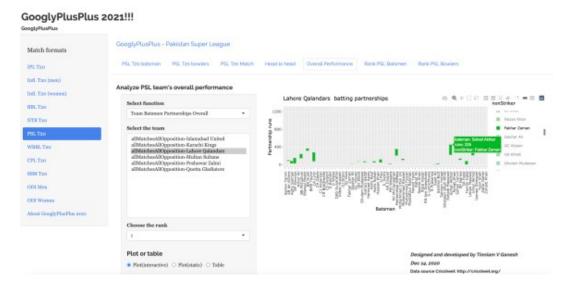
### j) Head-to-head (Performance of Indian batsmen vs Australian bowlers)- ODI

In the plot V Kohli, MS Dhoni and SC Ganguly have been selected for their performance against Australian bowlers (use *toggle spike lines*)



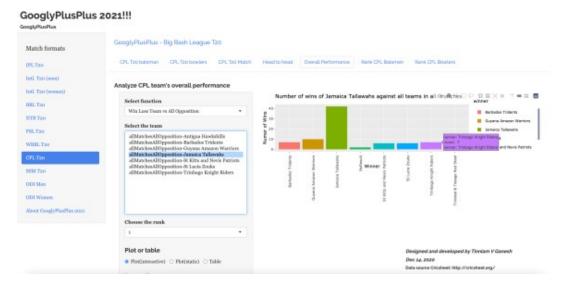
### k) Overall Performance - PSL batting partnership against all teams (Fakhar Zaman)

The plot below shows Fakhar Zaman (Lahore Qalanders) partnerships with other teammates in all matches in PSL.



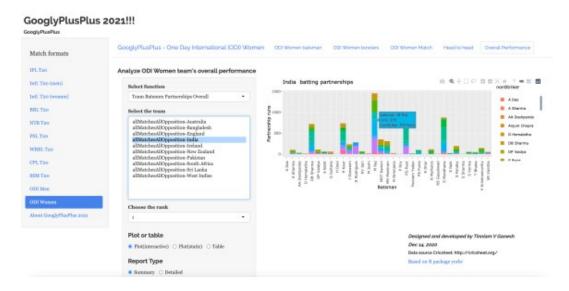
### I) Win-loss against all teams (CPL)

Win-loss chart of Jamaica Talawallahs (CPL) in all matches against all opposition



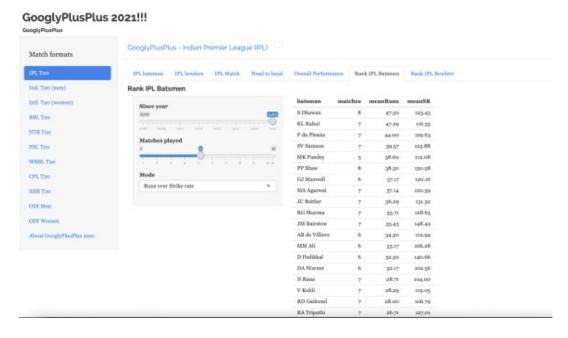
### m) Team batting partnerships against all teams for India (ODI Women)

Batting partnerships of Indian ODI women against all other teams

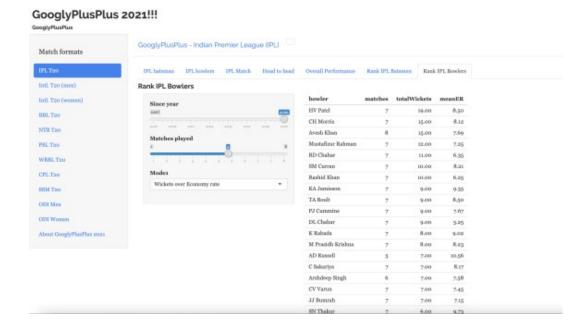


### n) Ranking of batsmen (IPL 2021)

Finally here is the latest ranking of IPL batsmen for IPL 2021 (can be done for all other T20 formats)



### o) Ranking of bowlers (IPL 2021)



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