

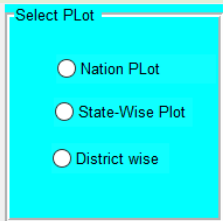
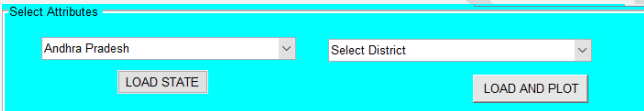
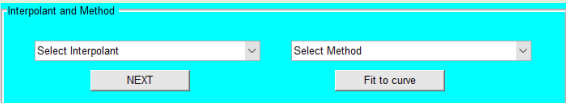
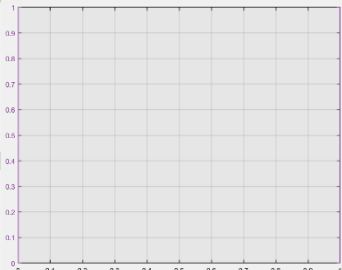
SIGNALS AND SYSTEMS-PROJECT REPORT

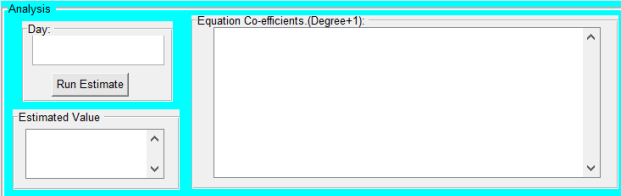
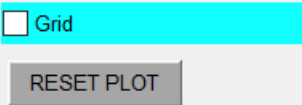
PROJECT NAME	Covid-19 Basis Plots and Curve fitting.	PROJECT NO.	2
PROJECT BY	PROJECT CATAGEORY	PROJECT INCHARGE	PROJECTED DATE OF COMPLETION
Pranav K (1BY18EE042)	SIGNAL PROCESSING.	Dr PRASHANT A	28-NOV-2020

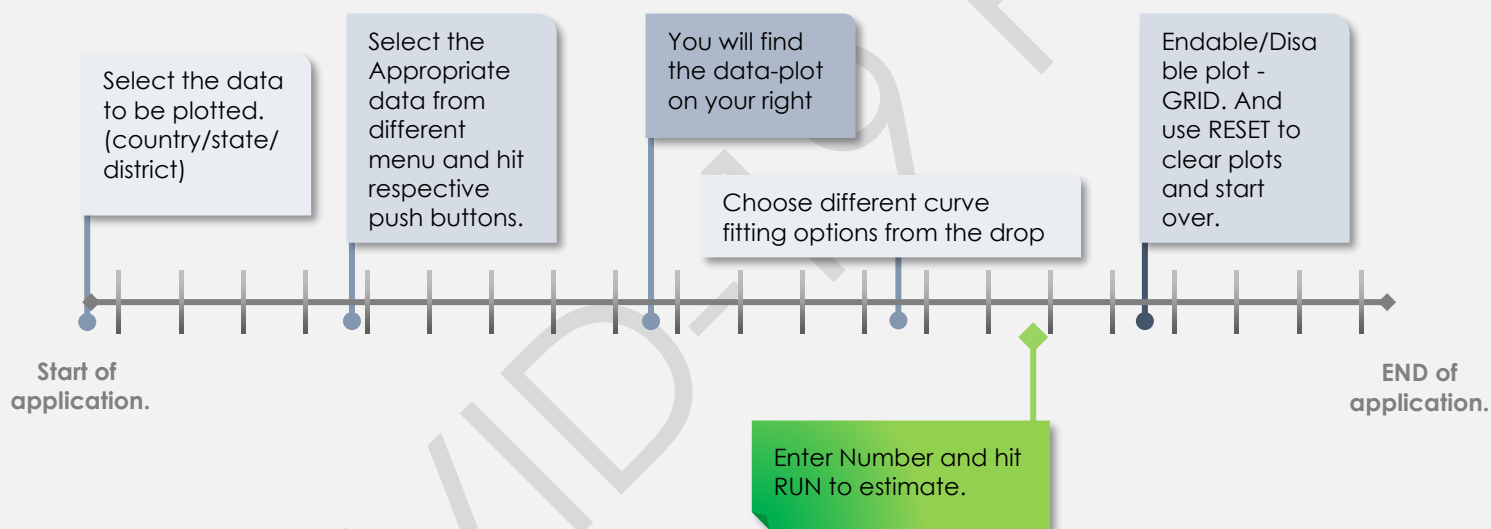
PROJECT SUMMARY

Here Is a small executable file, that's been designed for curve fitting, expecting to follow agile methadology. But this is the basic one with limited functions. It has been pre loaded with a pre-processed spreadsheet(''.xlsx') file. It holds details of the past 300 days of reported Indian Covid-19 cases. We have different plots(country/state/district). This exe file has been deployed from MATLAB(r2020A, Liscences under BMSIT institute).It also plots different curve fitting curves to approximate the curve helping one to analyse the same using equations and estimate/projection at different values .

PROJECT OVERVIEW

TOOL GROUP	PURPOSE	DESCRIPTION	COMMENTS
	SELECTION OF DATA(COUNTRY/ STATE/ DISTRICT)	SELECTING OFF ANY PLOT, LOADS THE PRELOADED FILE AND READS THE DATA THAT'S IS TO BE PLOTTED.	READ MESSAGE BOXES AND SELECT RESPECTIVE BUTTONS.
	ATTRIBUTE SELECT-(DISTRICT WISE PLOT ONLY) ALLOWS YOU TO SELECT A PARTICULAR STATE AND ITS RESPECTIVE DISTRICT.	SELECT DESIRED STATE AND CLICK LOAD STATE. RESPECTIVE DISTRICTS AND LOADED IN THE NEXT DROP DOWN MENU.	IT TAKES A FEW SECONDS BECAUSE THE DATA IS TOO BIG AND THE ALGORITHM IS NOT NORMALISED.
	SELCT INTEROPOLANT (Least Square Method AND ITS ORDER.	LINER/ POLYNOMIAL/ LOGARITHIMIC/ POWER FIT.	SINCE WE HAVE ONLY ONE AXES, PLOTTING LOG/POWER FIT IS NOT POSSIBLE BUT TO SCALE CONSTRAINTS.
	PLOTTING AXES.	THE SELECTED DATE IS LOADED AND PLOTTED IN HERE.	IT TAKES A FEW SECONDS TO FETCH DATA AND PLOT.

	ENTER NUMBER TO ESTIMATE/ OUTPUTS THE POLYNOMIAL EQUATION'S CO-EFFICIENTS	ONCE THE INTERPOLATION IS SELECTED AND PLOTTED , CO-EFF AND OBTAINED AND THE CAN BE ESTIMATED FOR DIFFERENT VALUES.	NA
	GRID ON/OF RESET PLOT	TURNS GRID OFF/ON RESETS THE AXES.	NA



This was an assignment I had taken up. I wanted to do it differently, I might also work on this in the future. One conclusion I made by observing the plots was that higher order polynomial fits the plot with less errors (adjuster R-Square approximately 1). But this is not true in all cases as estimation beyond available data is highly inappropriate.

My source of data was covidindia.org, Do check it out. Shoutout to a few matlab courses such as "Data processing and Analytics". This was just a basic one. I could learn a lot apart from the daily classes, mainly I dealt with different data types, return types, handling objects, and calling functions. Thank you

COVID-19 PLOT