

Frank Martino - Proof of Skills Analytical Calculations Day 3

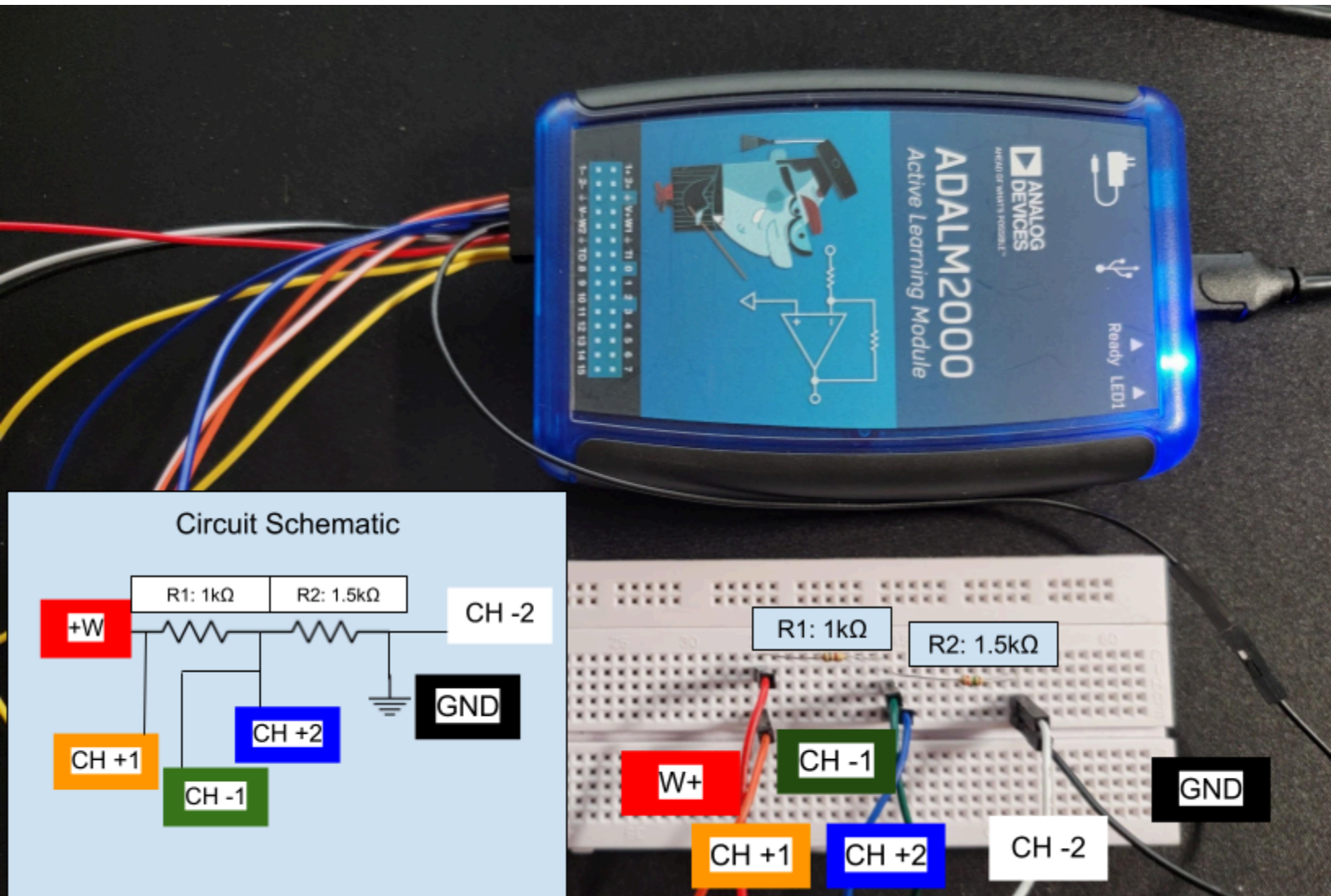
Q3 Analytical Calculations with personal calculator (TI-XX) and MATLAB or equivalent

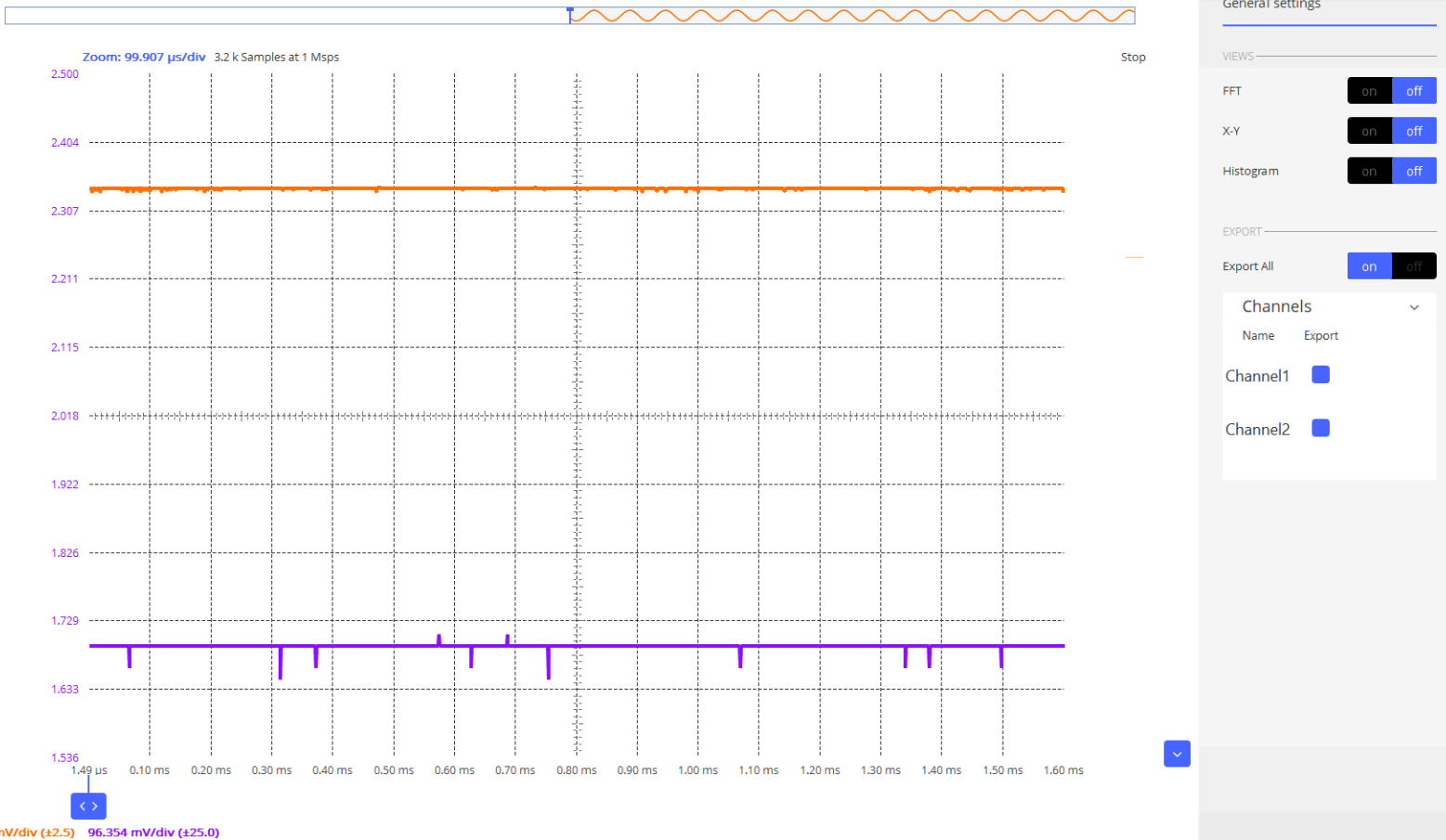
Prove your skill set in using tools for analytical calculations.

Q3.6 Importing Experimental Data

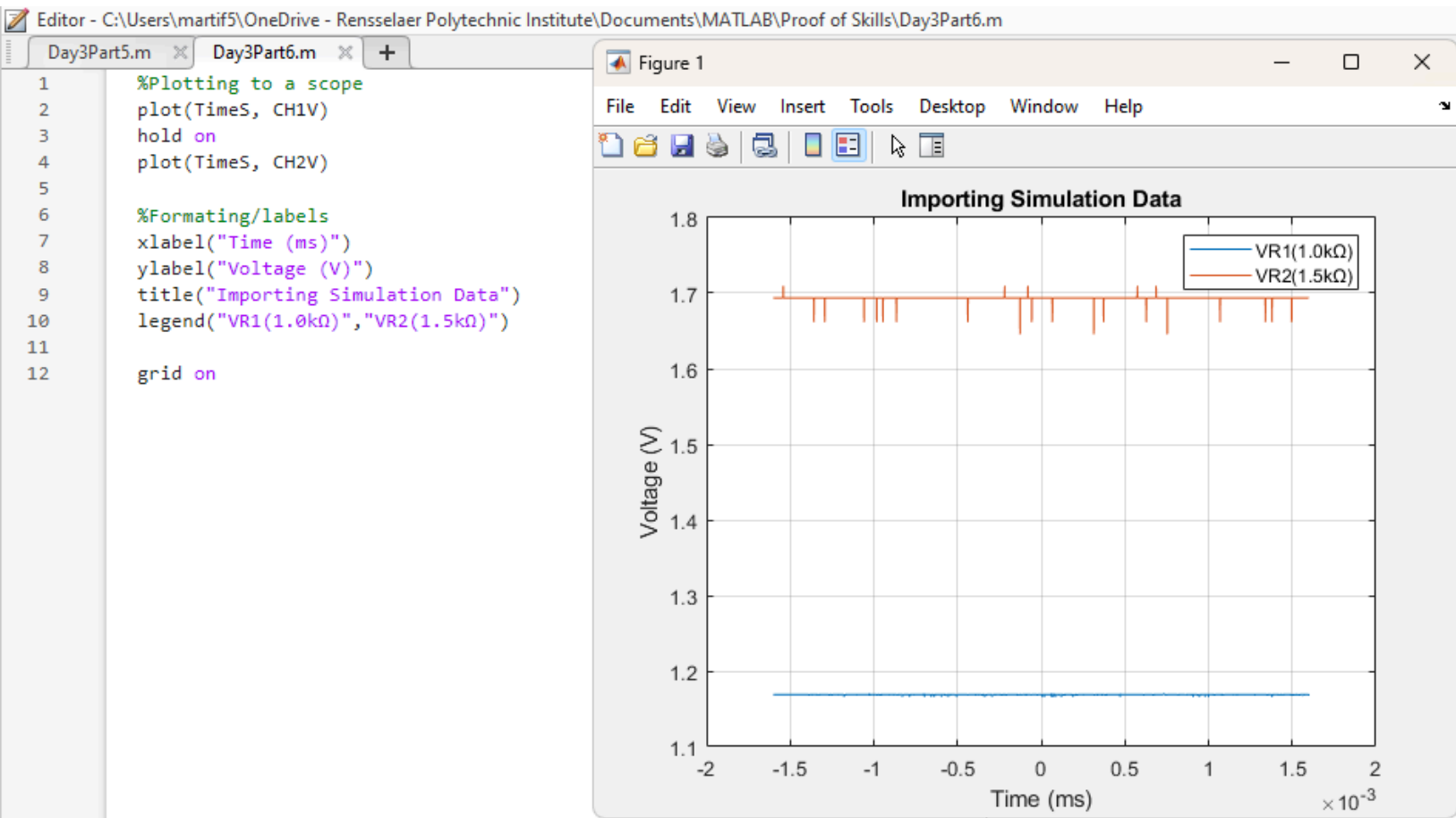
I can import experimental data (from ALICE or Waveforms) to MATLAB and plot the function

I can prove my skills in importing data from real world experiments like using the ADALM2000 and Scopy. I first created a circuit that had two resistors in series R1(1kΩ) and R2(1.5kΩ) that are connected to a constant 3 volt DC source. After connecting channel W1 for the voltage source and ground, I used channels 1+ / 1- to measure the voltage across R1 and 2+ / 2- to measure the voltage across R2. The circuit used is shown below.





Above is a screen shot of the oscilloscope output from Scopy where the orange graph represents the voltage across R1 and the purple line represents the voltage across R2. Using the tab shown on the right I was able to export the data as a text file. Text files are compatible with Matlab and can be graphed when imported and converted to column vectors, which can then be graphed with a simple program. The code used in Matlab and the output graph are shown below.



As the above graph shows, the Matlab plot is identical to the plot provided by Scopy.