

Good Day Students!

Greencell (www.greencellmobility.com) is an E-mobility company and we manufacture and run the largest Electric bus fleet in the country under the brand name NueGo. We are offering internships in connected vehicles and data analysis domain. This is an internship to permanent hire position.

For our internship program we are looking for students who like data, like to find problems and critically analyze and solve them. We like our team members to have multifaceted personalities, which means not only should you be a code champ, but we expect you to come with soft skills like good communications, team spirit and critical thinking. .

You have to be :-

1. Good at Python, Data visualization, Analytics (a webframework like Django or Flask is a plus)
2. Be a quick learner and like solving problems. Critical thinking and ability to read long instructions are going to come in handy
3. Be a team player
4. A good communicator
5. Have a good attitude and we will teach you code and data over the internship

To screen the right candidates we have a little challenge for you. It is in three steps and should take about half an hour to 2 hours depending on your skillsets and google capabilities. We prefer you do not use AI generated code .

Assignment : Data visualization and interpretation

Setup

1. Use the attached Excel sheet for your assignment
2. The data contains two columns Voltage & Timestamp .

Data visualization on Excel

1. Use excel to plot this data (voltage on y axis and timestamp on x axis
2. Create a trendline on the Voltage data (your chart will look like figure 1.
3. Write 5 sentences describing that data and how you interpret it

Python Data visualization and manipulation

1. Easy problem : Import this data into a Python Dataframe
 - a. Plot the same chart as you did in excel using your favourite plotting library
 - b. create a 5 day moving average on the plot
 - c. Use python Find local peaks and lows in the data . tabulated them
 - d. Find out every instance the Voltage went below 20 and tabulate it
2. Bonus points : Find every instance where the downward slope accelerates in each downward cycle and print the timestamp
3. Bonus points : Host this python code on your favourite hosting server

Annexure:

1. What your python chart should look like

FIGURE 1 :

