# Density_time

September 26, 2024

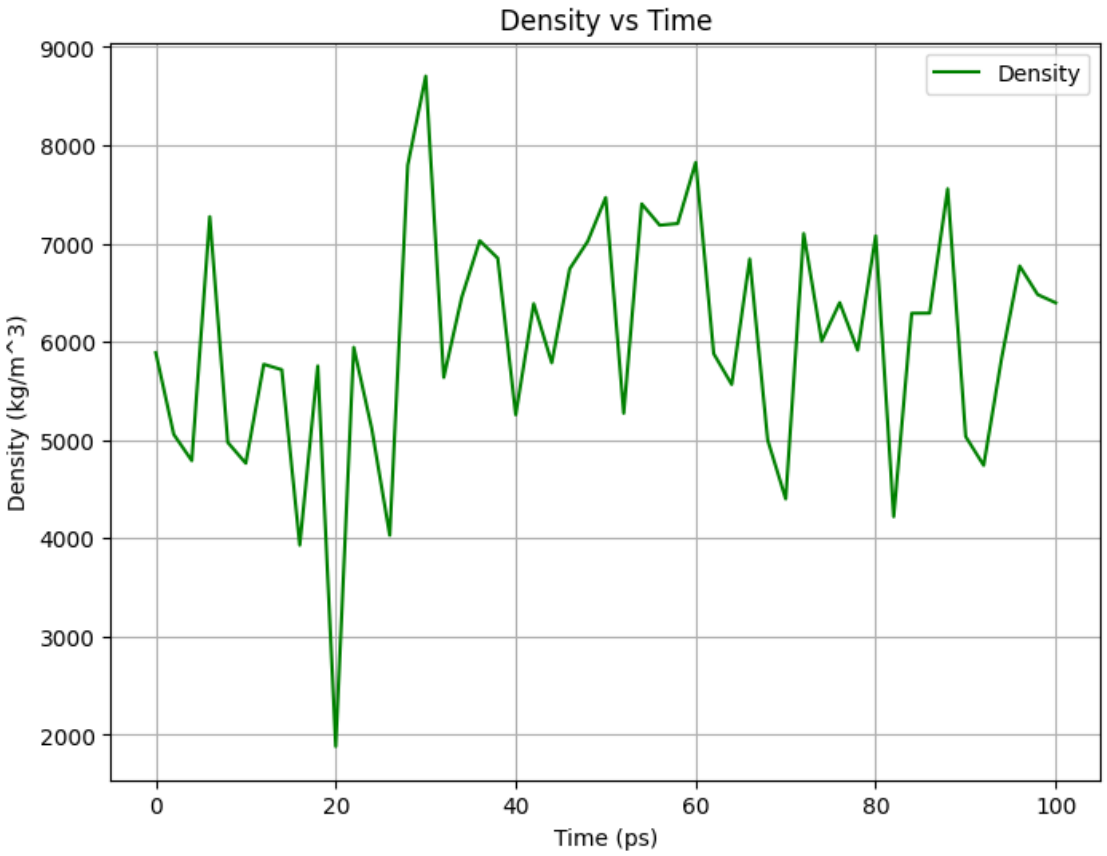
[1]:
```
import numpy as np
import matplotlib.pyplot as plt

#   .xvg     #   @
def read_xvg(filename):
    data = []
    with open(filename, 'r') as file:
        for line in file:
            if not line.startswith(('#', '@')):
                data.append([float(x) for x in line.split()])
    return np.array(data)

#   density.xvg
data = read_xvg('./density.xvg')  #

#
time = data[:, 0]
density = data[:, 1]

#
plt.figure(figsize=(8, 6))
plt.plot(time, density, label='Density', color='g')
plt.xlabel('Time (ps)')
plt.ylabel('Density (kg/m^3)')
plt.title('Density vs Time')
plt.grid(True)
plt.legend()
plt.show()
```


Density vs Time
Density
Density (kg/m^3)
Time (ps)
9000
8000
7000
6000
5000
4000
3000
2000
0
20
40
60
80
100

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