

```
In [2]: import numpy as np
import pandas as pd
import seaborn as sns
```

```
In [3]: data_1 = pd.read_csv('008ExerciseFile.csv') # you can name your array whatever
```

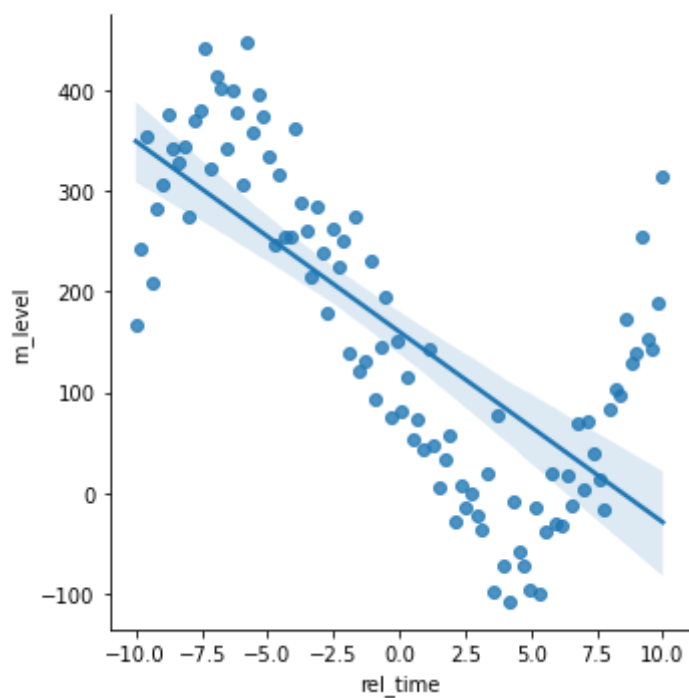
```
In [4]: display(data_1)
```

	rel_time	m_level
0	-10.000000	166.846602
1	-9.797980	243.656949
2	-9.595960	354.591642
3	-9.393939	209.023218
4	-9.191919	283.431508
...	...	...
95	9.191919	255.174991
96	9.393939	152.987761
97	9.595960	142.685158
98	9.797980	189.684193
99	10.000000	314.140057

100 rows × 2 columns

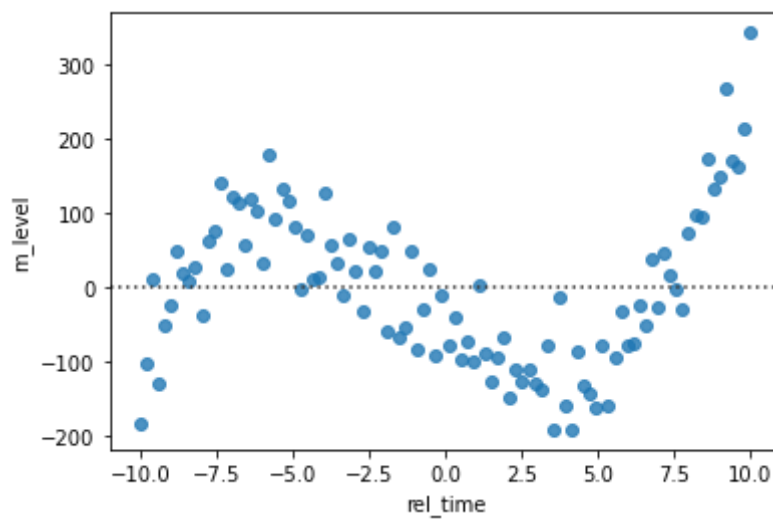
```
In [5]: sns.lmplot(data=data_1, x='rel_time', y='m_level')  
# The straight line does not fit the data too well because the residual fo
```

```
Out[5]: <seaborn.axisgrid.FacetGrid at 0x7fe9f9947400>
```



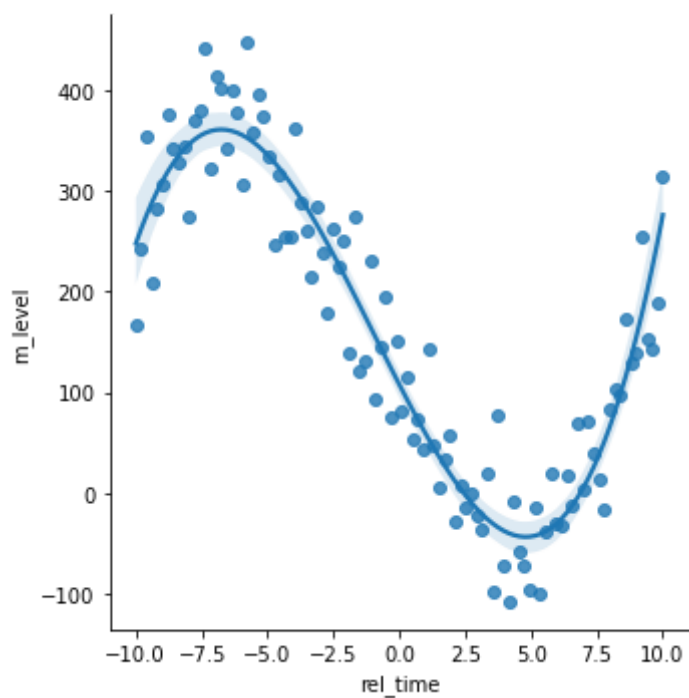
```
In [9]: sns.residplot(data=data_1, x='rel_time', y='m_level',)
```

```
Out[9]: <AxesSubplot:xlabel='rel_time', ylabel='m_level'>
```



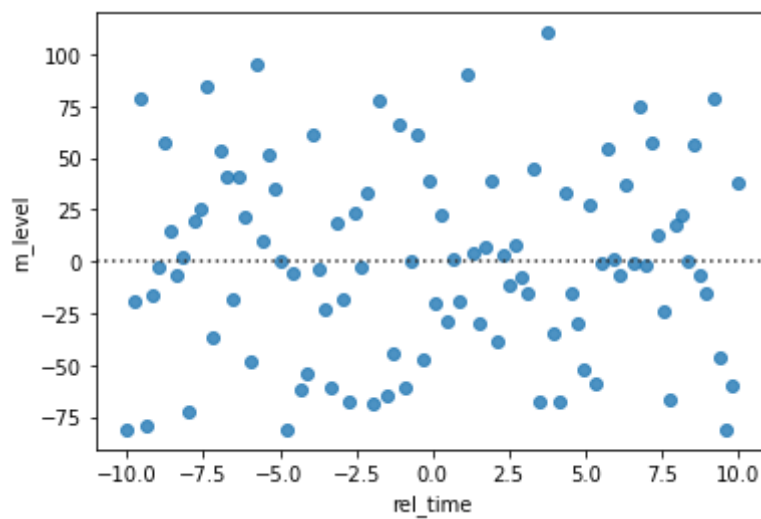
```
In [7]: sns.lmplot(data=data_1, x='rel_time', y='m_level', order=3)  
# This line would fit the data better due to its matching shape and reason
```

```
Out[7]: <seaborn.axisgrid.FacetGrid at 0x7fe9dafbd910>
```



```
In [10]: sns.residplot(data=data_1, x='rel_time', y='m_level', order = 3)
```

```
Out[10]: <AxesSubplot:xlabel='rel_time', ylabel='m_level'>
```



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In [ ]:
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In [ ]:
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