# Specifying a model

You will build a simple regression model to predict the orbit of the meteor!

Your training data consist of measurements taken at time steps from **-10 minutes before the impact region to +10 minutes after**. Each time step can be viewed as an X coordinate in our graph, which has an associated position Y for the meteor at that time step.

Note that you can view this problem as approximating a quadratic function via the use of neural networks.
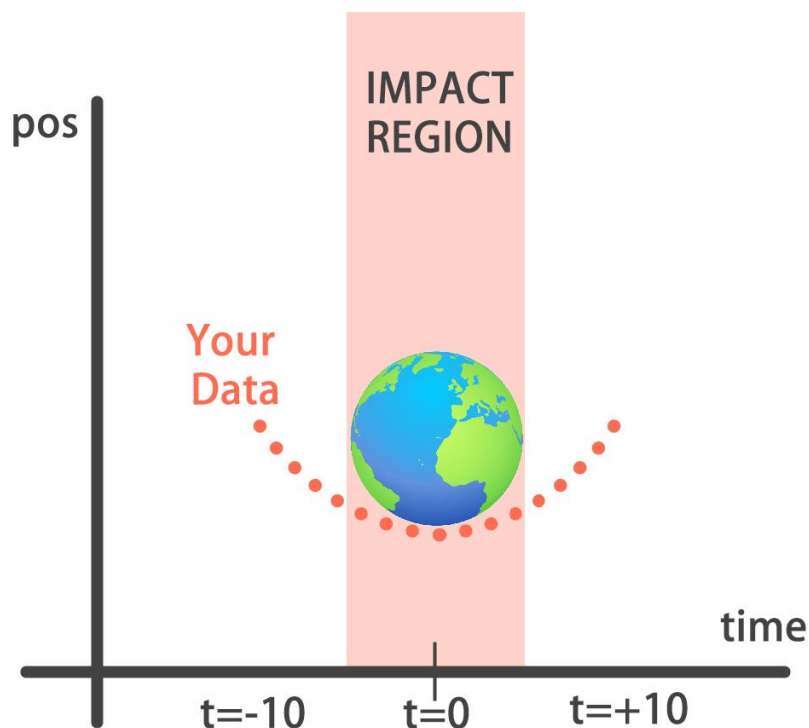
This data is stored in two numpy arrays: one called `time_steps` , containing the *features*, and another called `y_positions`, with the *labels*.

Feel free to look at these arrays in the console anytime, then build your model! Keras `Sequential` model and `Dense` layers are available for you to use.

- Instantiate a `Sequential` model.

- Add a Dense layer of 50 neurons with an input shape of 1 neuron.
- Add two Dense layers of 50 neurons each and `'relu'` activation.

- End your model with a Dense layer with a single neuron and no activation.

```python
# Instantiate a Sequential model
model = Sequential()

# Add a Dense layer with 50 neurons and an input of 1 neuron
model.add(Dense(50, input_shape=(1,), activation='relu'))

# Add two Dense layers with 50 neurons and relu activation
model.add(Dense(50,activation='relu'))
model.add(Dense(50,activation='relu'))

# End your model with a Dense layer and no activation
model.add(Dense(1))
```