Assignment A4

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Contents

1. Exercise

(a)

Most of this has been completed in the "madA4" Jupyter Notebook. There are a few things that should be noted though:
Since the model has to pass through $(0,0)$, and our result is a function with a nonzero value for c, we have to disregard it. This makes the model less precise.

(b)

To estimate the location where he falls down, we simply have to look at the weights of w. This leads us to a function that looks as follows:

$$f(x) = -0.9788095238095242x^2 + 9.982809523809527x - 0.4659999999999926$$

We make sure the model intersects $(0,0)$ by setting $c = 0$, and solve for $f(x) = 0$ using Wolfram Alpha and get the following value for the landing:

$$x = 10.19892970080272$$

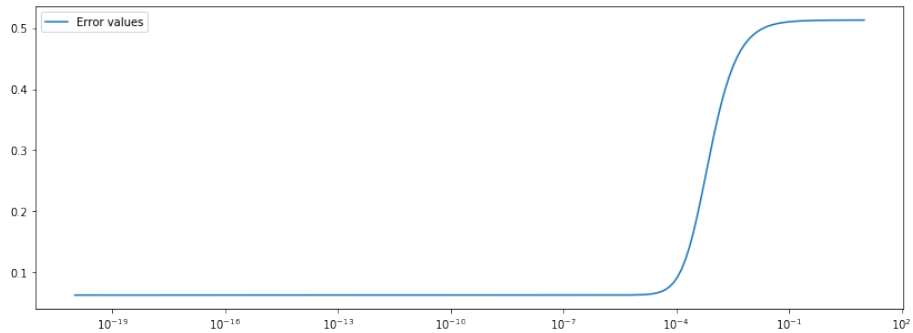
(c)

This part of the exercise has been completed in the attached Jupyter Notebook.

2. Exercise

(a)

This part of the exercise has been completed in the attached notebook. The resulting plots will be displayed both here and there:



(b)

This part of the exercise has been completed in the attached notebook. The resulting plots will be displayed both here and there: