Problem Set 1 - Linear Regression

There is a system represented as $y = a_1x_1 + a_2x_2 + a_3x_3$. Our goal is to find $A = [a_1, a_2, a_3]$ using the given 10,000 observations of (x_1, x_2, x_3, y). Find the best A using two different approaches: (1) solving for a closed form solution, (2) Gradient descent. Describe pros and cons of each approach that we observe during the experiment. For this experiment, you are allowed to use Python language only with Numpy package.