We imported the following:

图形用户界面, 文本

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1. The code of estimate correspondence is as follows:

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Where I transformed the X points and used the argmin\_min function to generate a list of shortest distance points from list 1 to list 2.

From there I checked if that distance is shorter than d\_max and append if true.

1. The code of computing optimal rigid registration is as follows (next page):

In the code, I followed the pseudo code to calculate centroid, and covariance, constructed the optimal rotation, and recovered the optimal translation.

文本

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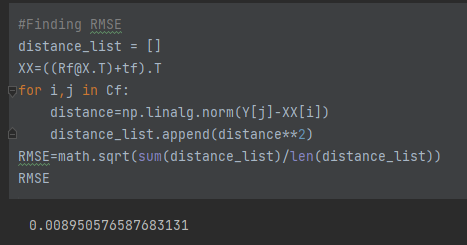
1. The ICP algorithm is as follows:

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It takes in input and uses the above two algorithms to perform fixed number of times as requested.

1. RMSE:



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And the output is

图表

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With the code used to plot:

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It’s seen that it’s a beautiful dragon.