Chapter 1

Linear Regression

1.1 Fitting a robust regression model using RANSAC

Algorithm 1: RANdom SAmple Consensus (RANSAC) algorithm

1 begin

2 **repeat**

3   Select a random number of examples to be inliers and fit the model;

4   Test all other data points against the fitted model and add those points that fall within a user-given tolerance to the inliers;

5   Refit the model using all inliers;

6   Estimate the error of the fitted model versus the inliers;

7 **until** *the performance meets a certain user-defined threshold or if a fixed number of iterations was reached*;

8 end