https://datascience.stackexchange.com/questions/6547/open-source-anomaly-detection-in-python

http://scikit-learn.org/stable/modules/outlier\_detection.html#outlier-detection

|  |  |
| --- | --- |
| **novelty detection:** | |
|  | The training data is not polluted by outliers, and we are interested in detecting anomalies in new observations. |
| **outlier detection:** | |
|  | The training data contains outliers, and we need to fit the central mode of the training data, ignoring the deviant observations. |

#### one class svm

#### elliptic envelope

#### isolation forest

##### question

给定100个维度，如何得知哪些维度促使该点成为异常点？

解析异常点的决策路径

#### LOF

#### gaussian distribution

https://github.com/aqibsaeed/Anomaly-Detection

#### Robust PCA

https://medium.com/netflix-techblog/rad-outlier-detection-on-big-data-d6b0494371cc

http://statweb.stanford.edu/~candes/papers/RobustPCA.pdf

#### ESD Algorithm

http://www.itl.nist.gov/div898/handbook/eda/section3/eda35h3.htm

#### [Twitter S-H-ESD Algorithm](https://blog.twitter.com/2015/introducing-practical-and-robust-anomaly-detection-in-a-time-series)

https://github.com/nlittlepoole/thermometr

the Seasonal Hybrid **ESD** (**S**-**H**-**ESD**) **algorithm**

https://github.com/twitter/AnomalyDetection