

Author's Accepted Manuscript

A Survey on semi-supervised feature selection methods

Razieh Sheikhpour, Mehdi Agha Sarram, Sajjad Gharaghani, Mohammad Ali Zare Chahooki



PII: S0031-3203(16)30354-5
DOI: <http://dx.doi.org/10.1016/j.patcog.2016.11.003>
Reference: PR5946

To appear in: *Pattern Recognition*

Received date: 16 February 2016
Revised date: 3 November 2016
Accepted date: 5 November 2016

Cite this article as: Razieh Sheikhpour, Mehdi Agha Sarram, Sajjad Gharaghani and Mohammad Ali Zare Chahooki, A Survey on semi-supervised feature selection methods, *Pattern Recognition*, <http://dx.doi.org/10.1016/j.patcog.2016.11.003>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting galley proof before it is published in its final citable form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

A Survey on semi-supervised feature selection methods

Razieh Sheikhpour¹, Mehdi Agha Sarram^{1*}, Sajjad Gharaghani², Mohammad Ali Zare Chahooki¹

¹Department of Computer Engineering, Yazd University, Yazd, Iran

²Laboratory of Bioinformatics and Drug Design (LBD), Institute of Biochemistry and Biophysics,
University of Tehran, Tehran, Iran

r_sheikhpour@stu.yazd.ac.ir

mehdi.sarram@yazd.ac.ir

s.gharaghani@ut.ac.ir

chahooki@yazd.ac.ir

*Corresponding author: Department of Computer Engineering, Yazd University, Yazd, Iran. Tel:
+989133510376

Abstract

Feature selection is a significant task in data mining and machine learning applications which eliminates irrelevant and redundant features and improves learning performance. In many real-world applications, collecting labeled data is difficult, while abundant unlabeled data are easily accessible. This motivates researchers to develop semi-supervised feature selection methods which use both labeled and unlabeled data to evaluate feature relevance. However, till-to-date, there is no comprehensive survey covering the semi-supervised feature selection methods. In this paper, semi-supervised feature selection methods are fully investigated and two taxonomies of these methods are presented based on two different perspectives which represent the hierarchical structure of semi-supervised feature selection methods. The first perspective is based on the basic taxonomy of feature selection methods and the second one is based on the taxonomy of semi-supervised learning methods. This survey can be helpful for a researcher to

Download English Version:

<https://daneshyari.com/en/article/4969901>

Download Persian Version:

<https://daneshyari.com/article/4969901>

[Daneshyari.com](https://daneshyari.com)