

Support Vector Machines

Data Mining

Machine Learning

# How can I apply an SVM on mixed data (numerical & nominal) attributes?


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## 2 Answers



Umut Eser, My postdoctoral research heavily involves machine learning techniques.  
Answered Apr 19, 2018

Yes you can.

Good practices:


- Try standardizing the numerical data, i.e. zero mean unit variance, i.e. subtract the mean, divide by the variance.
- Use one-hot encoding for your nominal data, i.e. a vector whose dimension matches the total number of nominal classes and whose entries are all zero except the dimension corresponding to the class you want to represent, which is 1.

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- How can I apply an SVM for categorical data?
- How do I use a clustering algorithm on data that has both categorical and numeric value ?
- How can I use KNN for mixed data (categorical and numerical)?
- How do we apply k-means clustering algorithm for mixed data-numeric and categorical?




Colleen Farrelly, Data Scientist/Poet/Social Scientist/Topologist (2009-present)  
Answered Aug 3, 2017 · Upvoted by Scott Matton, M.S Computational Statistics & Data Mining, University of Central Florida (2017) and Rajiv Sambasivan, Have applied machine learning to text datasets · Author has **12.9k** answers and **22.9m** answer views

Try creating dummy variables for the nominal data. Make sure it is really nominal and not ordinal, as order might matter for some categories.

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How can I apply an SVM for categorical data?

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How can I use KNN for mixed data (categorical and numerical)?

How do we apply k-means clustering algorithm for mixed data-numeric and categorical?

Why is SVM not popular nowadays? Also, when did SVM perform poorly?

How can I apply dimensionality reduction on mixed data (categorical and hybrid)?

What is the main difference between a SVM and SVR?

What is the SVM technique?

Does SVM suffer from the "curse of dimensionality"? If so, how does SVM overcome it?

Do we need to convert categorical data to numerical data before applying to decision tree?

What is SVM RBF?

What makes SVM good method when dealing with high-dimensional data?

How do I prepare dataset for SVM train?

I'm applying SVM to a binary classification problem using R. How can I get to know the significance values of parameters/variables using SVM f...