

# Fecal Coliform Estimation using SVMs

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# Work Plan

Objective	Finish Date
Literature Review	Sep-25 <sup>th</sup>
SVM Programming	Oct-25 <sup>th</sup>
Parameter Adjustment	Nov-10 <sup>th</sup>
Comparison-ANN/SVM	Nov-25 <sup>th</sup>
Final Presentation	Dec-1 <sup>st</sup>



# Tools Used

Jupyter

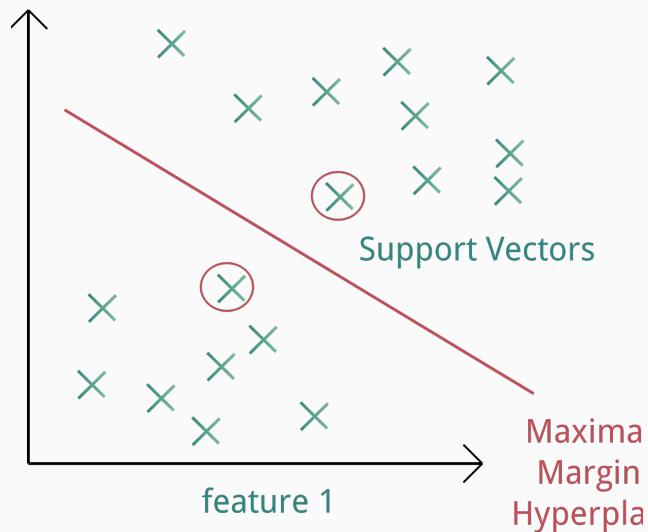
Scikit-learn



# 50%

WATER CONTAMINANT INFECTIONS ARE CAUSED BY COLIFORM BACTERIA

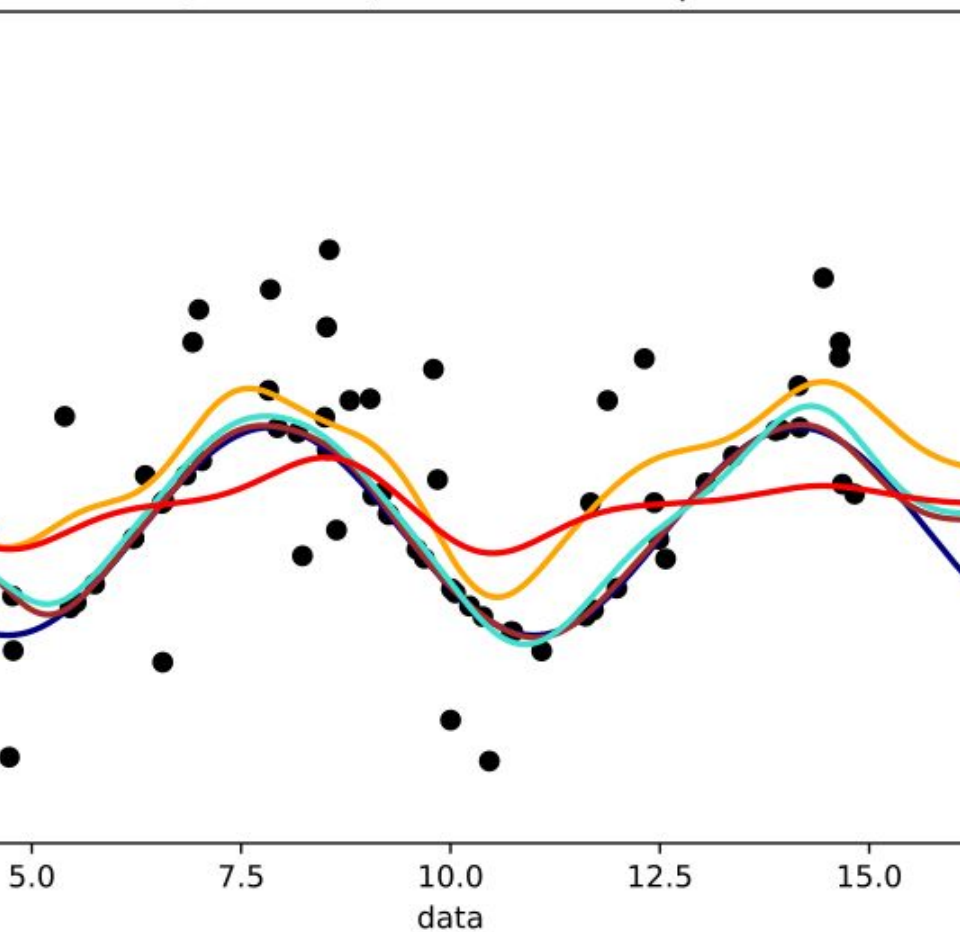
## Support Vector Machines



# Support Vector Machines

A classifier

SVR (rbf kernel) with Different Epsilons



# SVR

Kernel based regression

# RBF | LINEAR | POLYNOMIAL



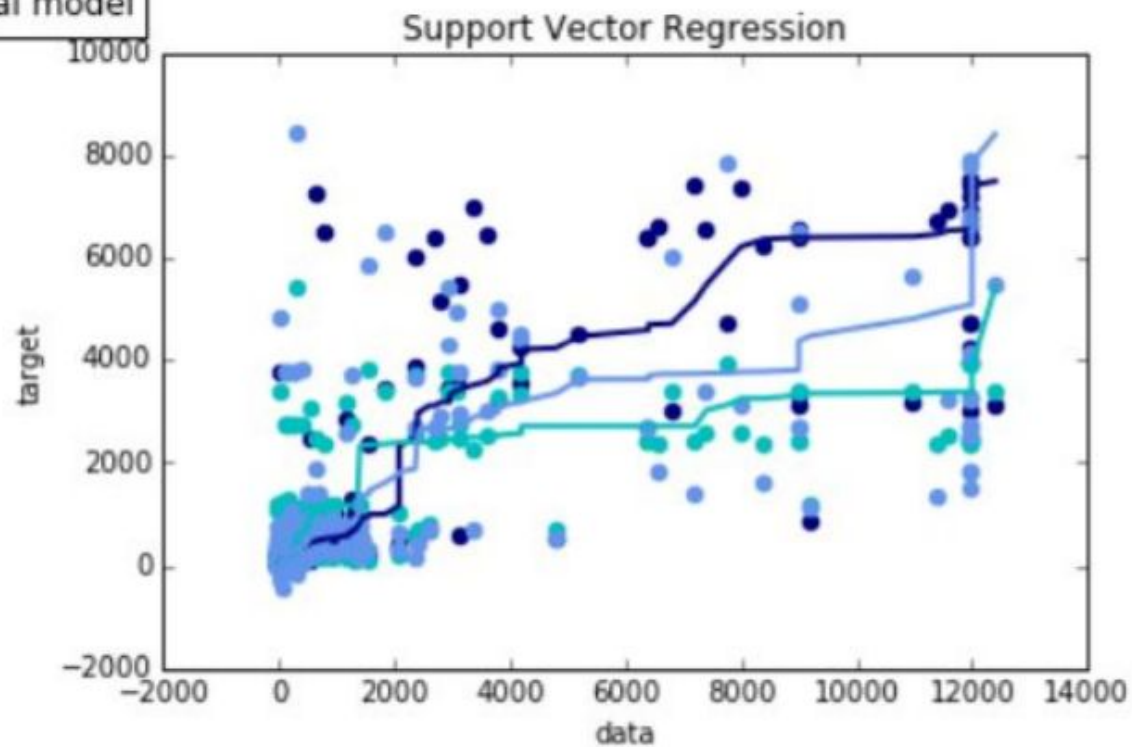
KERNELS USED

RBF Wins!!

0.8 Pearson  
Correlation



- RBF model
- Linear model
- Polynomial model
- RBF model
- Linear model
- Polynomial model



Thanks!

