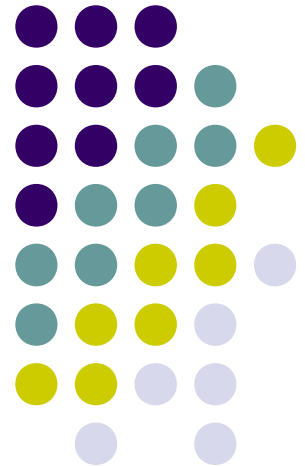


# Pattern Recognition

## Lab5: SVM-based classifier

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# Lab 5.1

- Read the file 'pima-indians-diabetes.data'
- Part the set into two equal subsets: assume one (PimaTr) as training set and the other one (PimaTest) as test set
- Starting from the training set, build a SVM- based classifier.
- Try:
  - Different kernels
  - Different values for the kernel parameters
  - Different values for C for C-SVM
  - Different values for nu for nu-SVM



## Lab 5.2

- Use the tool <https://github.com/reiinakano/scikit-plot> to plot the ROC curves evaluated on the different classifiers you built in the previous task



# Reading Pima dataset

```
import numpy as np
```

```
# Read the data set
```

```
set = np.genfromtxt("pima-indians-diabetes.data",  
delimiter = ",")
```

```
# Build the positive and negative subsets
```

```
setpos = np.copy(set[set[:,-1]>0,:])
```

```
setneg = np.copy(set[set[:,-1]==0,:])
```