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Example: Multivariate Gaussian Classifier

We have two-dimensional data from three classes (A, B, C). The classes are assumed to have equal prior probabilities.

The training data is in files $trainA.dat$, $trainB.dat$, $trainC.dat$, test data in files $testA.dat$, $testB.dat$, $testC.dat$.

tasks:(Lec04_a_Exercise.ipynb)

- 1. load and plot the data. How many data points? How many features?
- 2. get the mean and covariance of data in each class
- 3. compute the conditional probabilities of each class given the data
- 4. assign the data in a class that have the maximum posterior probability

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Task:(Lec04_b_Exercise.ipynb)
Plot Gaussians with Python