



THE UNIVERSITY OF
CHICAGO

COMPUTATIONAL AND APPLIED MATHEMATICS
STUDENT SEMINAR

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Linear Discriminant Analysis

Tuesday, February 15, 1:30-2:30pm
Jones Laboratory, Room 303

ABSTRACT

Linear Discriminant Analysis is a binary classification method based on maximum likelihood. For continuous n -dimensional data, it generates an $n - 1$ -dimension decision boundary that divides the sample space into two disjoint subspaces such that if a point is on one side of the boundary, then it is most likely to be in one class; otherwise, it is most likely to be in the other class. In this presentation, we will explore the statistical theories underlying LDA including the Bayes classifier and maximum likelihood estimation of parameters, as well as analyze the form of LDA's decision boundary in the univariate case.