THE DEPARTMENT OF MATHEMATICAL SCIENCES

Indiana University - Purdue University Fort Wayne

is pleased to present

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Classification Methods and Their Applications in Gene Expression and Annual Financial Data

Abstract

Classification is the problem of identifying to which of a set of categories (sub-populations) a new observation belongs, on the basis of a training set of data containing observations (or instances) whose category membership is known. An example would be assigning a given email into "spam" or "non-spam" classes or assigning a diagnosis to a given patient as described by observed characteristics of the patient (gender, blood pressure, presence or absence of certain symptoms, etc.), or predicting whether a financial firm is going bankrupt or nonbankrupt based on previous years financial data available. In this presentation we will discuss some results on classification methods and their application for annual financial data and gene expression data. The traditional classification methods don't work well for high-dimensions (i.e. when we have more variables than the sample size) and we need to select the important variables before we do classification. We also study the associated variable selection methods for high-dimensions.

Noon – 1:00, Tuesday, Feb. 23, 2016. Location: KT 117

`http://ipfw.edu/departments/coas/depts/math/news/seminars.html`