Keynote Talk

Data Winnowing

Prof. Dr. Yoav Freund
University of California
San Diego, CA, USA
yfreund@ucsd.edu

Abstract
Massive quantities of digital data are being collected in every aspect of modern life. Examples include Personal photos and videos, biological and medical images and recordings from sensor arrays. To transform these massive data streams into useful information we use a sequence of “winnowing” stages. Each step reduces the size of the data by an order of magnitude; extracting the wheat from the chaff. In this talk I will describe this approach in a variety of contexts, ranging from the analysis of genetic pathways in fruit-fly embryos and C-Elegans worms to counting birds and helping elderly people living alone keep in touch with their family and caregivers.

Categories & Subject Descriptors: H.2.8 [Database Management]: Database Applications - Data Mining

General Terms: Algorithms

Bio
Yoav Freund is a professor of Computer Science and Engineering at UC San Diego. His work is in the area of machine learning, computational statistics and their applications. Dr. Freund is an internationally known researcher in the field of machine learning, a field which bridges computer science and statistics. He is best known for his joint work with Dr. Robert Schapire on the Adaboost algorithm. For this work they were awarded the 2003 Godel prize in Theoretical Computer Science, as well as the Kanellakis Prize in 2004.