MATH and PIZZA

The Netflix Prize:

How Mathematics Can Predict Movies You'll Love

Speaker

Katharine Ott

Sponsored by

Department of Mathematics **University of Kentucky**

All students with an interest in Mathematics are welcome to attend !!

Date: Wednesday, April 1, 2009

Time: 4:00pm - 5:00pm

Room: 114, Classroom Building

Abstract: Recommendation engines are programs that use a set of ratings from a particular customer, along with ratings from the whole customer base, to predict new items that a consumer will like. Online stores such as Netflix, Amazon and iTunes employ recommendation systems to encourage users to make future purchases. In October 2006, Netflix offered $1,000,000 to anyone who can improve their current recommendation engine by 10%. Within the first month of the competition a mathematical technique from linear algebra called singular value decomposition (SVD) improved the recommendation engine by almost 4%.

In this talk I will discuss how user data collected by Netflix is arranged into a matrix, how to factor a matrix into its singular value decomposition, and why the SVD can find connections between movies a particular user likes and dislikes. I'll also give an update on the progress of the Netflix competition and why, despite early advances via singular value techniques, the million dollars remains unclaimed.

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