Course Name: eCommerce and Social Networks

Course Number: 55516

Course Time & Location: Tuesdays 16:30-19:00

Instructor Name: Dr. Dan Gang

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Office Hours: appointment by email, right after class hours

Course Blog: www.ecommerceandsocialnetworks.com

Course Description

The Internet carries complex computer-assisted economic transactions and involves cooperation and competition between technological systems that are owned and operated by different players with different goals. Studying and designing computer systems and applications requires integrating the economic and computational considerations. The core of our course will deal with the electronic markets and the wisdom behind the computational implementation of the services and that exhibit various types of complexities relative to classical human markets. In addition, we will discuss some relevant services and companies that are active in the field, such as: eBay, PayPal, Amazone, Netflix, Google, YouTube, iTunes, Pandora. We will discuss the social, commercial and cultural implications of the new business that was raised in the digital market recently in regards to the entertainment content such as: music, movies and books.
Partial list of topics

1. Principles of Google's search engine
2. Social Networks Sciences and Social Media
3. Search Engine Optimization (SEO and SMO)
4. Combinatorial auctions
5. Sponsored search auctions
6. Introduction to game theory and its implication to Social Networks
7. The “Long Tail” applied to entertainment content
8. Clustering, Recommendation systems and Collaborative Filtering
10. Reputation Systems

Assignments and Grading Policy

1. Class presentation (in small teams) or artical summary – 20 points
2. Home exercise to practice the learned computational aspects – 30 points
3. Final Project – 45 points
4. Contribution and sharing (class discussions, blog ...) – 5 points