# NetSpam: a Network-based Spam Detection Framework for Reviews in Online Social Media

## Aim and Objective:

The aim of this project is to identify the spam user and Positive and Negative Reviews.

## Problem Statement:

The problem as a het-erogeneous network where nodes are either real components in a dataset (such as reviews, users and products) or spam features. To better understand the proposed framework we first present an overview of some of the concepts and definitions in heterogeneous information networks.

## Abstract:

Nowadays, a big part of people rely on available con-tent in social media in their decisions (e.g. reviews and feedback on a topic or product). The possibility that anybody can leave a review provide a golden opportunity for spammers to write spam reviews about products and services for different interests. Identifying these spammers and the spam content is a hot topic of research and although a considerable number of studies have been done recently toward this end, but so far the methodologies put forth still barely detect spam reviews, and none of them show the importance of each extracted feature type. In this study, we propose a novel framework, named NetSpam, which utilizes spam features for modeling review datasets as heterogeneous information networks to map spam detection procedure into a classification problem in such networks. Using the importance of spam features help us to obtain better results in terms of different metrics experimented on real-world review datasets from Yelp and Amazon websites.

## Introduction:

Online Social Media portals play an influential role in information propagation which is considered as an impor-tant source for producers in their advertising campaigns as well as for customers in selecting products and services. In the past years, people rely a lot on the written reviews in their decision-making processes, and positive/negative reviews encouraging/discouraging them in their selection of products and services. In addition, written reviews also help service providers to enhance the quality of their products and services. These reviews thus have become an important factor in success of a business while positive reviews can bring benefits for a company, negative reviews can potentially impact credibility and cause economic losses. The fact that anyone with any identity can leave comments as review, provides a tempting opportunity for spammers to write fake reviews designed to mislead users' opinion. These misleading reviews are then multiplied by the sharing function of social media and prop-agation over the web.