Social Networks
Prof. S. R. S. Iyengar
Department of Computer Science
Indian Institute of Technology, Ropar

Lecture – 18
Handling Real-world Network Datasets
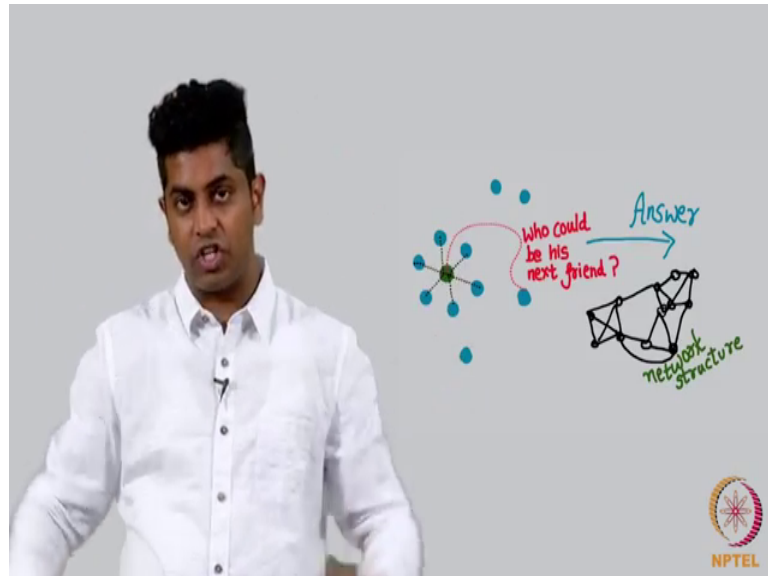**Social Network Datasets**

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Let us look at literally a good social network that we all are familiar with. We all know a Facebook or let us say LinkedIn, Twitter, Google Plus, they are all what is called the social networks where a bunch of people get together and then the declared he is my friend he she is my friend and so on. If you look at such a network, what do you mean by such a network? By that I mean you put an edge between 2 nodes; nodes are people here, if one is in the friend list of the other I have you in my Facebook friend list, you have been in my Facebook friend list, you know its mutual and you put an edge between these 2 people and you look at the entire friendship network this way again appearing is useless dataset.

But then Facebook again made good use of this dataset by asking this question, they said fine here is a bunch of friends of this person who could be is next friend no, now here is a very important topics that requires some explanation.
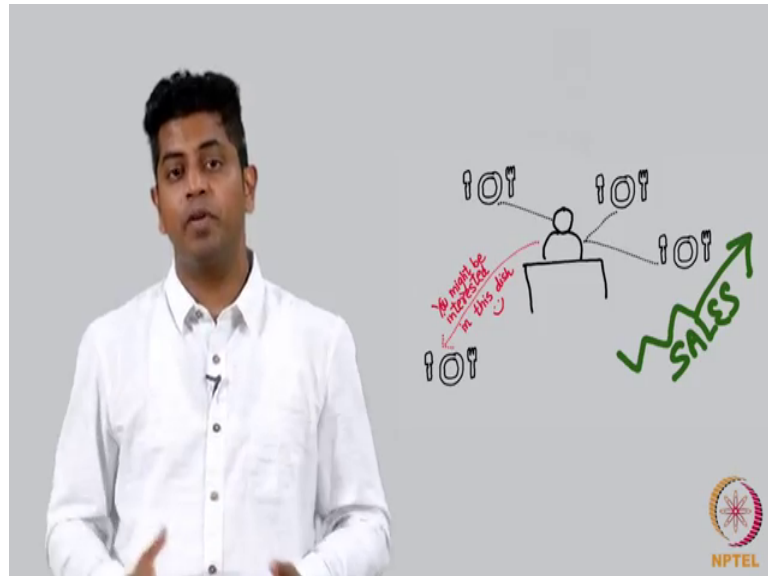
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Let us take a pause and try to analyze this question properly, here is a friendship network of who is friends with whom and you would like to say I recommend Sudarshan a new friend who is this, out of let say 7 billion possible friends in this world for me I have some thousand friends on Facebook, anybody outside this thousand friends can be my prospective friend.

Now, how will you choose one most probable friend for me out of this big lot of people of what use is this to a social networking site like let say LinkedIn, Facebook, Google plus, all these sites work based on the numbers the more friends you have more busy you get glue to the monitor being on the social networking sites. So, they want to increase the number of friends they can only increased when the show you a prospective friend. This prospective friend let us say he is your long lost childhood friend or this prospective friend is a friend you find very interesting for what is ever reasons how will Facebook know about it well the answer for this is hidden in the network structure there were few things that you must observe not just between you your friends, but in the entire graph which will give you a hint as to who will be your most probable next friend.

If you show me the most probable next friend I will probably the friend that person make friends with that person correct it is just like saying what dishes I eat and in a hotel in a restaurant and is an automated recommending system which says you may possibly be interested.

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In this particular dish that will increase the sales of the restaurant if they are able to predict properly what do you generally like eating similarly who will be your next friend in case it is predicted can result in increasing your friend list not only will you will it increase your friend list it will also populate your friend list with good friends good whatever you define it as the most important friends whatever I define it as. So, this is this goes into the name link prediction and Facebook friend list is a great playground for one to investigate on who could be the next probable friend.