Abstract:

Location Based Application are very common in todays world. There are endless applications on mobile phones and websites on our computer which uses the location-based data for many reasons. There are also many applications which cannot function without location data. Facebook uses user location to find friends or Google uses location for suggesting routes, shopping tips and restaurants. There are many other applications which uses user’s location to make suggestions, advertising, finding interesting places or shared with third party for further usage. The sharing of location is not active only when the application is used but rather fed with the location data also in the background. These private data can be leaked further to predict user whereabouts. The locations can contain the user’s personal living choices which not all user may want to make public or even share it with friends or family. This master’s thesis shows the potential risk related to location sharing. Once the location data is available for enough period, this can suggest user home, work location, the supermarkets he visits, the gym or club he/she visits and so on. The data used is from Microsoft Geolife location data and a model is formed to understand and predict user future locations. This model is to simulate how the user location data can be used (e.g., Facebook, Google, etc.) by third party applications and how the user future whereabouts can be predicted based on user location patterns.