

Presentation of the project

We are interested in fraud and intrusion detection using large volumes of server logs. Data is collected from different servers, and different degrees of reliability can be associated to these sources. The aim of this project is to experiment and compare different data mining techniques used for fraud and intrusion detection, and try to propose solutions that improve the scalability of the existing techniques and take into account the uncertainty associated to the input data. A possible direction is to focus on graph mining techniques and their application for fraud and anomaly detection. Then, we can try to extend the chosen approach to deal with the uncertainty associated to the data sources, and propose a solution that gives a reasonable computation cost for large data sets (modeled as large graphs, in this case).

Bibliography

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Keywords

Intrusion detection, fraud detection, data mining, graph mining, algorithms, scalability.

Applicant profile

- Master Degree or Engineer Student (last year of studies).
- Skills in programming, strong theoretical background in computer science.
- An experience with data mining techniques, graph mining, algorithms using MapReduce, will be appreciated.
- Availability for 5 to 6 months starting in the first semester of 2015.

Gratification: About 800€ net per month



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