

## Using of Data Mining Techniques for Fraud Detection in Banking System<sup>1</sup>

Fadi Khaloof<sup>2</sup>

Rakan Razouk<sup>3</sup>

Asef Shmeas<sup>4</sup>

### Abstract

Data mining is a process to extract the knowledge from a huge amount of data accumulated in banking databases by using artificial intelligence tools to help bankers in decision making process. This article aims to illustrate the data mining concept, and to apply its technologies in order to extract important knowledge, and to show how to use a new technique for fraud detection in banking system by comparing false alarm (FN) and missing transactions (FP) using Naïve Bayes algorithm and support vector machine algorithm to help the banking business for decision support to determine whether a customer's transactions is normal or fraud .

**Key words:** Data Mining – Support Vector Machine – Knowledge Discovery in databases – Fraud Detection – Banking .

<sup>1</sup> For the paper in Arabic see pages (331-350).

<sup>2</sup> Department of computers and automation, Faculty of Mechanical and Electrical Engineering, Damascus University.

<sup>3</sup> Dep. of software Engineering and information, systems, Faculty of it Engineering, Damascus University.

<sup>4</sup> Department of computers and automation, Faculty of Mechanical and Electrical Engineering, Damascus University.