Ministry of Higher Education and

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University of Babylon

College of Information Technology

Department of Information Security

Study: (Morning)

Email Spam Detection Using Machine Learning Algorithms

A Graduate Project Submitted to the department of Information Security of the College of Information Technology, University of Babylon, in Partial Fulfillment of the Requirements for the Bachelor's degree in the Information Security of Information Technology.

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Abstract

This project presents a novel approach to the persistent challenge of email spam detection through the application of Support Vector Machines (SVM), a supervised machine learning algorithm renowned for its effectiveness in classification tasks. Leveraging a meticulously curated dataset of emails represented in a CSV file, this study endeavors to refine the precision of spam detection mechanisms. By employing SVM's unique capabilities in creating optimal hyper planes, this work distinguishes between spam and non-spam emails with notable accuracy. The findings not only demonstrate SVM's suitability for the task but also contribute to the broader field of email security by offering a scalable and reliable spam detection solution. This research encapsulates the development process, from data preparation and model training to evaluation, showcasing the potential of SVM in enhancing email filtering techniques.