Exame sobre uma base de dados hospitalar com algoritmos de Mineração de Dados

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*Abstract* — Este artigo propõe uma análise sobre uma base de dados hospitalar com uso de dados de pacientes que foram atendidos previamente no intuito de reunir prever pacientes que podem vir a sofrer um ataque cardíaco.

Keywords — mineração de dados, aprendizado de máquina, data mining, machine learning, análise, saúde, ataque cardíaco.

# Introdução

A mineração de dados (*data mining*) é um conjunto de processos utilizados para encontrar padrões, correlações e realizar inferências a partir de uma base de dados existente.

Um hospital deseja que seja desenvolvido um programa que preveja ataques cardíacos em novos pacientes que dão entrada no setor de emergência, com base em dados reunidos de 303 pacientes atendidos previamente, contendo suas informações e indicando se o paciente sofreu, ou não, um ataque cardíaco.

O objetivo deste artigo é fazer um estudo comparativo em diferentes técnicas de classificação previamente escolhidas. Os classificados abordados serão o KNN (*k-nearest neighbors*) e o SVM (*Support vector machine)*.

# Referêncial Teórico

## KNN (k-nearest neighbors)

O KNN (*k-nearest neighbors*) é uma função não paramétrica, no sentido de que não são feitas ou dependentes de quaisquer suposições sobre as estatísticas subjacentes para sua aplicação, e é utilizado para classificação e regressão.

## SVM (Support vector machine)

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*a**b* 

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* The subscript for the permeability of vacuum **0, and other common scientific constants, is zero with subscript formatting, not a lowercase letter “o”.
* In American English, commas, semicolons, periods, question and exclamation marks are located within quotation marks only when a complete thought or name is cited, such as a title or full quotation. When quotation marks are used, instead of a bold or italic typeface, to highlight a word or phrase, punctuation should appear outside of the quotation marks. A parenthetical phrase or statement at the end of a sentence is punctuated outside of the closing parenthesis (like this). (A parenthetical sentence is punctuated within the parentheses.)
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* There is no period after the “et” in the Latin abbreviation “et al.”.
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