Unlocking the Power of Supervised Machine Learning: Applications and Insights

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Abstract: *Machine Learning Algorithms are subset of artificial intelligence that enable computer to learn from data without being explicitly programmed. Supervised Learning Algorithm is a category of Machine Learning that uses labelled dataset to train algorithms to predict outcomes and recognize pattern. Types of Supervised Machine Learning Algorithm are Linear Regression, Softmax Regression, K-Nearest Neighbour, Decision Tree, Random Forest, Logistic Regression, Support Vector Machines, etc. We can enhance decision-making processes, optimize resource allocation and unlock new predictive modelling and automation.Cancer is a complex disease with diverse etiology and outcomes. Early detection and accurate prediction of cancer can reduce the risk and is helpful to cure disease by giving effective treatment and improved patient outcomes. In recent years, machine learning algorithms have shown promising results in cancer prediction by analysing various biomedical data sources such as genetic, clinical, and imaging data. This study aims to develop a predictive model for cancer occurrence using machine learning techniques.*

Keywords: Machine learning, healthcare, Logistic Regression, Softmax Regression, Decision Tree, Breast Cancer