SwiftML – Accelerating Machine Learning Journeys.

Abstract: SwiftML is an interesting tool designed to simplify the process of automated machine learning models. It is a tool that is accessible even to non-experts. It is a user-friendly tool where users can evaluate the performance of different algorithms based on their datasets and choose a best-suited model. SwiftML performs essential tasks such as preprocessing, model training and testing. SwiftML supports both supervised and unsupervised learning tasks. With an intuitive Streamlit interface, users can easily upload datasets, choose algorithms, and view real-time results. The Pickle library integration allows users to save and download trained models for offline use, making it ideal for production deployment or personal use.SwiftML supports a wide range of 10-15 machine-learning algorithms. Hence, users can quickly access multiple models without deep expertise in machine learning. After training, it provides detailed performance metrics such as Mean Absolute Error, R2, Mean Square Error, and Root Mean Square Error, which helps users easily compare and select the best model. Using the Pycaret library, SwiftML processes the training and evaluating models, which helps save time and effort. SwiftML has become a valuable resource for data scientists, analysts, and anyone looking to implement machine learning models without any domain experts or extensive coding.

Keywords: Automated machine-learning, Pycaret, Streamlit, Pickle.

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