# ABSTRACT

Gastroesophageal Reflux Disease (GERD) is the reflux of stomach acid into the esophagus. GERD is a known cause of posterior laryngitis and chronic cough. In addition, GERD is also known as a risk factor for Idiopathic Pulmonary Fibrosis (IPF), therefore early detection of GERD is needed. Early detection of GERD usually uses a proton pump inhibitor (PPI), but this method has side effects to the user, therefore other methods are needed to detect GERD. Machine learning can be used to detect diseases with images as well as textual information. One of the machine learning methods that can be used is ensemble learning where this method combines several machine learning models to improve the performance of the built model. In writing this final project, an ensemble learning model was built to detect GERD based on reviews of drugs consumed by GERD sufferers and non-patients. The ensemble method used is Adaptive Boosting (AdaBoost) and Random Forest (RF) with data selection using feature importance. It is hoped that this method can produce a model with better performance than a model without an ensemble. This study shows that the RF model has a higher performance than the AdaBoost model where the RF and Adaboost accuracy are 91.32% and 88.36%, respectively

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**Keywords**: GERD, drug review, machine learning, ensemble learning, RF, AdaBoost.