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Identification and separation of infrasound signals from storms and quarry blasts via machine learning algorithms

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The infrasound array in Hungary has been operational since May 2017 at Pizskés-tető. Since then, it has collected over a million PMCC detections from various known sources such as microbaroms from the Northern Atlantic, quarry blasts and mine explosions, eruptions of Etna, storms, airplanes and so on. The goal of this study is to train, test, validate and compare machine learning models such as Random Forest and Support Vector Machine, for identification and separation of infrasound signals from storms and quarry blasts. The dataset contains identified signals from previous studies and from the Hungarian Seismo-Acoustic Bulletins. The features for training are extracted both from the time and frequency domains of the signals.