

## **Abstract**

Data land cover help us understand nature, how it develops, its uses and the influence that human actions have on it. Thanks to new methods in the remote sensing area, we can record these processes faster and at a larger scale than before. This thesis evaluates accuracy of the Random Forest (RF) and Maximum Likelihood (ML) classifiers using satellite data Sentinel-2 from the military training area Libavá. The military area went through a very specific development and the information regarding natural coverage in the region is missing. The classifier documentation contains 8 classes. The classification results from both algorithms are higher than 80 %. As expected, more accurate results were achieved using the Random Forest classifier. The most accurate classifications were of water surfaces and forests. The least accurate classifications were of agricultural land and sparse vegetation. Other classes varied in accuracy levels. This thesis' results are evaluated using error matrices, overall accuracy and the kappa coefficient.

**Keywords:** classification, Random Forest, Maximum Likelihood, military training area, remote sensing, Sentinel 2, land cover, Libavá