

# ***ABSTRACT***

Bachelor thesis deals with the utilization of UAV for data collection for photogrammetric purposes. Its goal is to create 3D models from the data used by the UAV. These are processed in selected UAV softwares based on analysis. In addition to the basic principles of UAV photogrammetry, the theoretical part includes a search for appropriate methodology for the preparation and implementation of the flight mission. Data processing took place in the Pix4D, 3DSurvey, and the Reference Photoscan used for general visualization. The final part evaluates the resulting accuracy of the outputs. Selected softwares were compared from 16 different criteria, making the Pix4D software the most convenient for processing UAV data. The aim of the thesis is not only to point out the potential of UAV resources in visualization of spatial data, but also the softwares used for this specific data.

## **Keywords**

*UAV, UAV photogrammetry, 3D model, drone, Agisoft Photoscan, Pix4D, 3DSurvey*