

## **Abstract**

Acquisition of bathymetric data, their processing and subsequent visualization of the achieved results in the internet environment using ArcGIS Online technology, this is the proposed bachelor thesis in epitome. The theoretical background of the thesis, explains the nature of interpolation methods and discusses their applicability to bathymetric data. The work's methodology focuses on data acquisition, processing and interpolation in ArcGIS Pro software. The individual outputs of the interpolation methods are evaluated and compared. Introduced solution also includes the design of a web map application based on ESRI technology. ArcGIS Online and its components, namely the Web AppBuilder, Survey123 and StoryMaps, were used to implement it. The application is focused on a potential visitor with the intention of fishing on the outskirts of the town of Humpolec, where the pond area of interest is located. It can also be used to support water management.

Keywords: online GIS, bathymetry, spatial data acquisition, spatial data processing