Abstract:

Today's smartphones are capable of taking pretty good quality photos and are able to connect to the internet via mobile network. Therefore, the aim of this thesis is to develop mobile application designed to leaf recognition. In the thesis we will discuss various algorithms suitable for efficient leaf recognition and their combinations. The client-server application (one of the looks of client applications would be a smartphone app) will be developed for the respective purpose. The application using discussed algorithms would be able to recognize the leaf samples by comparing them against the database patterns. We will also discuss various support algorithms mainly from the area of shape extraction from photography and from the area of leaf descriptors representation and comparison.